



Biological E. Limited
Celebrating Life Everyday



HIGH QUALITY
BIOLOGICALS
FOR A HEALTHY
AND SUSTAINABLE
FUTURE.

CORPORATE SUSTAINABILITY REPORT
2019



About the Report

Approach to Reporting

Biological E Limited publishes the sustainability report on yearly basis, disclosing the performance and initiatives in the economic, environmental and social space. Resulting from the introduction of GRI standards, we have made the transition from GRI-G4 and this year we have published our third sustainability report for the period 1st April 2017 to 31st March 2019 (hereafter referred as FY 2019 in the Report) as per GRI Standard "in accordance – core" criteria. We have also tried to align our Report to the United Nations Sustainable Development Goals (UNSDGs). This report showcases our approach to sustainability, along with our strategic overview, objectives and performance.

Principle for Defining Report Content

At Biological E Limited, we believe that broader and inclusive stakeholder engagement provides valuable inputs for identification of topics of material importance. Our materiality assessment has provided the context and helped us prioritize strategies and action plans in the areas of the economy, environment and society. In this Report, we have disclosed on all the material topics, identified as high and very high in the materiality matrix, in line with the GRI standard. While developing the content of the report, we have aligned our sustainability report as per the disclosure requirements of GRI standards by applying the reporting principles of materiality, stakeholder inclusiveness, sustainability context and completeness.

There are no significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain. There have been no restatements of data for any of the previous year's reports.

Scope and Boundary

This Report covers our vaccines and pharmaceutical (hereafter referred as pharma) business operations in India. The general standard disclosures covers information pertaining to our vaccines and pharma business operating across all locations whereas the specific standard disclosures covers the performance data for the manufacturing units of vaccine division at Shameerpet, Gaganpahad, and pharma business at Shameerpet only. We are working towards enhancing our reporting boundary and intend to cover the performance disclosure of our Azamabad and Patancheru manufacturing locations. Our most recent sustainability report for the financial year 2016-17, was published in August 2018.

Key exclusions

In this Report key exclusions are as mentioned below-

Economic performance of both vaccines and pharma business for FY 2018-19 (1st April 2018 to 31st March 2019)

Total production and net sales of both vaccines and pharma business for the FY 2018-19 (1st April 2018 to 31st March 2019)

Report Assurance

The content and data disclosed in this report has been independently verified and externally assured. The conformance of our Sustainability Report FY 2019 with "in accordance - core" requirements of the GRI Standard has been verified by British Standard Institution (BSI), an independent third party assurance provider. The Report has been assured with the requirements of AA1000 Assurance Standard, AA1000AS (2008) Type I and the statement provided by BSI is included in the report.

Queries or comments related to this report may be directed to: sustainability@biologicale.com

Forward Looking Statement- The report includes forward-looking statements based on certain assumptions and management plans. In the report, these statements have been identified by words such as 'intend', 'anticipate', 'believe', 'expect', 'project', 'plan', etc., as far as possible. Should they materialize, the achievement of the projections is subject to risks and uncertainties.

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Towards Sustainable Business



Indian pharmaceutical business has contributed greatly not just to national but international healthcare outcomes. The Pharmaceutical exports for the FY 2017-18 was recorded as US\$ 17.27 bn. The exports during April-December 2018-19 was US\$ 13.94 bn, showing a growth of 9.32% over the FY 2017-18¹. India continues to play a substantial role in manufacturing various critical, high- quality and low-cost medicines for global markets. India supplies over 50% of worldwide demand for many vaccines, 40% of generic drugs consumed in the US and 25% of all the medicines distributed in the UK. India caters to 60% of global anti-retroviral (ARV) drugs and 30% of the annual UNICEF requirement. A topnotch research & development capabilities and favorable market conditions over the last few years have ensured that India continues to be one of the most lucrative pharmaceutical markets in the world.

Amidst the growing economy, our vision is to sustain global leadership position in chosen areas of business and to constantly create new opportunities for growth in our strategic business. We are focusing on niche areas with a diversified, strong pipeline of product portfolio and creating a business model that offers products which are affordable and accessible to all. Our journey "Towards a Sustainable Business" is persistent. We are strengthening our ability to create and sustain economic, environmental and social value for society. Our strategy is to foster the Company to be an integrated global life sciences company, with a commitment to building a sustainable society. Improving health & survival of people by providing equitable access to quality vaccines & pharmaceutical products – our mission unites us all and shall guide our sustainable growth story in future.

¹Government of India Ministry of Commerce & Industry

Founders Vision

Late Dr. Vijay Kumar Datla, the force behind organization's thrust, strongly believed in individual learning and development at Biological E Limited. We are committed to improving the quality of human life by enabling people to do more, feel better and live longer.

Mission

Improve health & survival of people by providing equitable access to quality vaccines & pharmaceutical products.

Vision

By 2025, become the largest Indian vaccines company and be among the top few Indian companies in complex generics & specialty pharmaceuticals.

OUR VALUES

Quality & Safety



Collaboration



Integrity



Respect for Individual



Efficiency



Customer Focus



Foreword from Managing Director



Dear friends and colleagues,

I am pleased to present to you our third sustainability report titled 'Towards Sustainable Business', which encapsulates our performance and commitment towards the 'Triple Bottom Line'.

There are certain challenges that concern people globally – requiring each one of us to define our action plan towards mitigation and prevention. Protecting the environment, conserving resources, and mitigating climate change are such challenges, as is the holistic sustainable development of our society, particularly through education and equal opportunities. All of us, including companies like Biological E, have to take responsibility for current and future generations. As an organization, we are committed to discovering, developing and delivering innovative medicines for people around the world. Our work to develop transformative healthcare products is built upon decades of scientific research and commitment to address the challenges faced in the healthcare sector. Over the past few years, we have made decisions that sharpen our research focus and collaborated with international organizations to develop affordable and accessible medicines. We received 8 patents and launched Measles and rubella vaccine, positioning us as the 2nd company in India manufacturing that vaccine. We have undertaken several important steps to help patients around the world gain access to the therapies they need.

Our continuous investment in building state of the art infrastructure has resulted in significant advancement in new product development in different stages of clinical trials. Operating in a highly competitive, dynamic economy and technology-driven environment, we are persistently inspired to innovate our R&D programs that helps us stay ahead in the business.

We are aware of our actual and potential environmental and social footprints and have adopted the precautionary approach to minimize the adverse impact that our business operations may pose to the physical environment. Our persistent focus on employee health and safety has helped us achieve more than 4 years of recordable injury free operations.

We continue to enhance our corporate culture by not just meeting our commitments, but also doing it the right way. The sustainability goals that we set for ourselves, we are making notable progress across the eight focus areas.

The results of our progress can be read in the section Sustainability at Biological E. In line with our business strategy of expanding existing products into new territories and massive investment towards development and sale of new products, we are also developing our sustainability 2025 framework which is built upon four pillars - affordable medicines; water and energy; employee health and safety; and responsible procurement.

To ensure continued business success, we hire best of talent and nurture them with ethos of our founding principles, striving to enhance the technical capabilities of our work force. Our new employees are also trained in our R&D facilities that enhances their knowledge & skills and prepares them for their career aspirations, while working towards organization's business goals. We continuously engage with the communities to better understand the challenges faced by them. Our objective has always been to help the disadvantaged section of society and strive to bring in positive impact on the society through our initiatives.

At BE, the challenges are regarded as opportunities to improve. As I conclude, I would like to reiterate our commitment towards being a responsible business. I would also like to take this opportunity to express my gratitude to all our stakeholders for partnering with us in our journey towards sustainable business. Your views and suggestions in this journey are important and I welcome your feedback.

Sincerely yours



Mahima Datla
Managing Director

Letter from Senior Vice President



Dear Readers,

We at Biological E are focused to develop therapeutics that are available, accessible and affordable, thereby providing distinguished service to all the stakeholders to support Indian and global comprehensive healthcare growth plans. We are involved in adapting technologies, adopting innovative approaches, and implementing world-class practices and standards.

The sustainability report aims to articulate our long-term sustainability vision and highlight our performance across economic, environmental and social parameters. I believe that periodic publication of this report helps us communicate our commitment to sustainability to all our stakeholders more efficiently and effectively. And it will further strengthen our stakeholder's trust and belief in Biological E as a sustainable public organization. We underscore our commitment towards sustainability, we are working towards developing a tangible strategic goals and objectives to ensure sustainable performance across all our operations and practices. We are committed to operating in a way that recognizes the interconnection between business growth, the needs of society and the limitations of our natural reserves.

The year gone by has been an eventful year for us. We inaugurated two state-of-the art facilities for developing & manufacturing Noscapine, Noscapine Hydrochloride and Enoxaparin Sodium (ES) at Shameerpet. In line with our business strategy and our dedication to provide innovative healthcare solutions for our customers, we have expanded our offerings through a series of collaborations. These investments help us gain more expertise, and achieve improved quality and remain agile in dynamic market.

During the reporting period, we initiated the process of developing our 2025 sustainability framework built on four pillars -

1: Accessible Medicines: We are sincerely committed to providing access to our medicines and making our medicines affordable to those in need.

2: Employee Health and Safety: Optimizing employee health, safety and wellbeing has always been a priority for BE, as we believe that it not only benefits our employees but also helps to increase productivity and drive business success.

3: Responsible Procurement Practices: Local procurement is one of our major focus, currently more than 80% of the procurement is from the local market especially in the area of our operations. Our focus is on responsible procurement practices wherein we develop supplier engagement programs and also help them comply with the best practices around environment, health, safety and labor practices.

4: Water and Energy: We are committed to safeguarding the environment. Being a water dependent industry, we are taking necessary measures to decrease our water footprint. We are also aiming to reduce our energy usage and move towards renewable energy to meet our energy requirements.

We continue to work towards achieving our 2025 goals, our performance report section highlights our progress against each goals. We are also committed to driving the attainment of the United Nations' Sustainable Development Goals (UNSDGs) in our business practices. We will continue to support the state and central governments in their efforts towards the attainment of the 17 goals, focused on improving the wellbeing of the environment and people.

I would like to take this opportunity to thank all our stakeholders for their continued trust and support in our endeavors to create a more sustainable society. With this, I present to you Biological E's Sustainability Report and welcome you to be an active part of our sustainable business journey.

Best Regards,

Narender Mantena

From Chief Operating Officer's Desk - Vaccine Business



Dear Stakeholders,

We at Biological E are rigorously working to enhance the course of human health through noble pursuits in medicinal science. Discovering, developing and delivering breakthrough medicines for patients with unmet medical needs is our mission. Through this report, we articulate what that really means at Biological E Limited. We also acknowledge the vital role our employees play in both fulfilling our mission and the ways in which they are striving to manage the environmental footprint to support a healthy planet, and demonstrate our commitment to conducting business with integrity.

With the increase in both viral and bacterial infectious diseases, the demand for vaccines increased significantly. Now, ever than before, our stakeholders expect us to make a meaningful difference in the world of vaccines by making it accessible and affordable. With our strong R&D capabilities we have developed new products in past and built a strong pipeline of products like Typhoid Conjugate Vaccine –

TCV, Pneumococcal Polysaccharide Conjugate Vaccine – PCV, Inactivated Polio Vaccine (IPV), Hepatitis A and AP based products which are at different stages of clinical development. We embrace our responsibility to address the health care needs around the world. We work tirelessly to deliver truly innovative and life-changing therapies.

We as a responsible organization are committed to developing products that meets global demand and provide them at prices that magnifies access to healthcare. We collaborate with healthcare professionals, governments and other corporates to improve the healthcare technologies, increasing the availability of vaccines to communities where it is hard to reach, especially in the low and middle income countries.

We have successfully demonstrated our mission to develop and commercialize affordable vaccines through our DTwP franchise in developing countries, and this collaboration allows us to serve additional markets and diversify our geographical presence. With the technical expertise and dedication of our employees we are able to consistently discover, develop and deliver vaccines that are accessible to the society. We are committed to hiring the best people, and to prepare them for fruitful tomorrow by cultivating every employee's full potential and fostering a culture that rewards performance and innovation.

While conducting our operations, we are committed to environmental and social responsibility, being water positive and transition to carbon neutrality are our key focus areas. We are formalizing our 2025 sustainability framework, and are also making steady progress towards achieving our goals set earlier. We hold ourselves accountable to these goals and through this report, we provide updates on our progress.

I believe, each individual at BE and we as an organization have the capability not only to achieve our business and strategic objectives, but also to fulfill our responsibilities towards society by applying patient focus, forward-looking practices, strong values, ethics and integrity to every facet of our work. I would like to thank all our stakeholders for their continued support.

Best Regards,

Lakshminarayana Neti.

Chief Operating Officer's Message – Pharmaceutical Business



Dear Colleagues,

Sustainability as a practice is ingrained in all our activities, including our environmental and social initiatives, and is intricately entwined into all our business functions. Our vision clearly states that we would strive to be the largest Indian vaccines company. Over the years we have been initiating and taking up activities and programs that are helping us move forward to achieve our vision.

Our sustainability report highlights our performance on these aspects and provides our stakeholders with information on the progress that we have made on this front. We have tried to integrate the data pertaining to pharmaceutical business to the maximum extent possible at this stage. Our endeavor is to produce one standard report across all the businesses and geographies in a phased manner, and this is the first step in that direction.

The pharmaceutical industry throughout the world is highly regulated and like everywhere else, we face a changing and challenging spectrum of regulations impacting production, registration of medicines, and pricing.

Apart from gearing up for the changing industry circumstances we are working towards developing new products which are accessible to everyone. We are also expanding our product reach to low and middle income countries.

During the reporting period we instated two state of the art facilities to manufacture Noscapine and Noscapine Hydrochloride and Enoxaparin Sodium (ES), at Shameerpet facility. Inauguration of this innovation hub has been an important milestone for us. We also successfully completed USFDA and other key customer audits at pharma operations, reinstating their trust in us. We are also targeting US, Japan and European markets to expand our product reach. I believe Biological E as an organization is currently well positioned to meaningfully contribute to various national and international goals, notably on good health and well-being.

As an organization that has embarked on journey of becoming a sustainable business, we have identified our growth vectors and critical areas of focus. The initiatives we undertake, both long-term and short-term, directly confront the issue at its root level with a strategic, holistic approach that ensures the desired results. We have identified energy management, water and natural resource management, environment conservation along with employee safety & wellbeing and building a more inclusive society as our key areas of work.

In line with our commitment to sustainability, we are in the process of establishing measurable and achievable targets to amplify our social responsibility, environmental stewardship and economic growth. We have laid the foundations for our long term future success aiming to be recognized as a leader in healthcare solutions and will focus on efficient, integrated and sustainable initiatives that support our objectives.

In this challenging environment, we will continue to pursue value-adding opportunities to expand our product portfolio through acquisitions, partnerships and innovation. I would like to take this opportunity to thank all our stakeholders for their belief in the brand – Biological E. We are working towards strengthening the organization as responsible, transparent and responsive to its stakeholder's requirements. I believe that the commitment to Sustainability will ensure our international competitiveness and promote a comprehensive sustainable growth

Best Regards,

Madhu B.

ORGANIZATIONAL FOOTPRINT

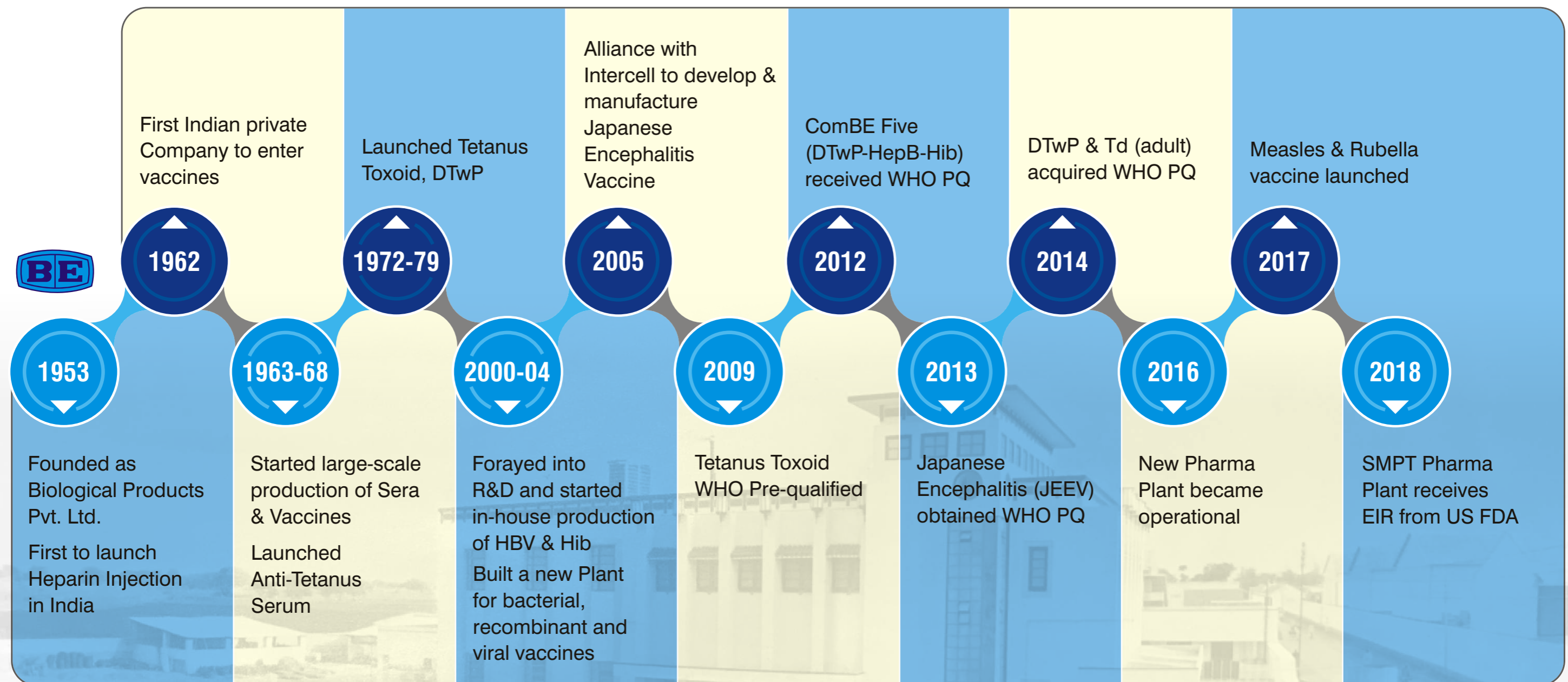


In 1953, Dr. Datla Venkata Krishnam Raju, founded Biological Products Private Limited. For the first ten years, the company manufactured, generic biological products, such as heparin injections, an anticoagulant that prevents blood clots, for the Indian market. In 1963, the company entered into an equity partnership with Evans Medical, a UK based pharmaceutical and vaccine manufacturer, and the company changed its name to Biological Evans Limited. And we later transitioned to be called as Biological E. Limited.

We are the 'first private sector biological products company' and a pioneer in the vaccine industry in India. We have always displayed the vigor, energy to surmount ever higher peaks and the vision to constantly expand our horizons. We are a company driven by knowledge – a huge pool of talent that gives us the competitive advantage to make an impact in the global markets. Our unequalled values and a quality customer-centric policy forms the basis of our investments in systems and infrastructure.

We take pride in our historical and on-going partnership with the Government of India in the National Immunization Program of the country. This enables us to provide access to critical vaccines to millions of children in India. It is among the largest vaccine manufacturers in emerging markets, with about 80 percent of revenues coming from vaccine divisions.

Our International division provides a global-access to high quality innovative products and caters to the health and well-being of people worldwide. We are also a forerunner in the preventive medicines sector. Biological E Limited is a serious participant in the exciting new face of medical science - Gene Therapy.

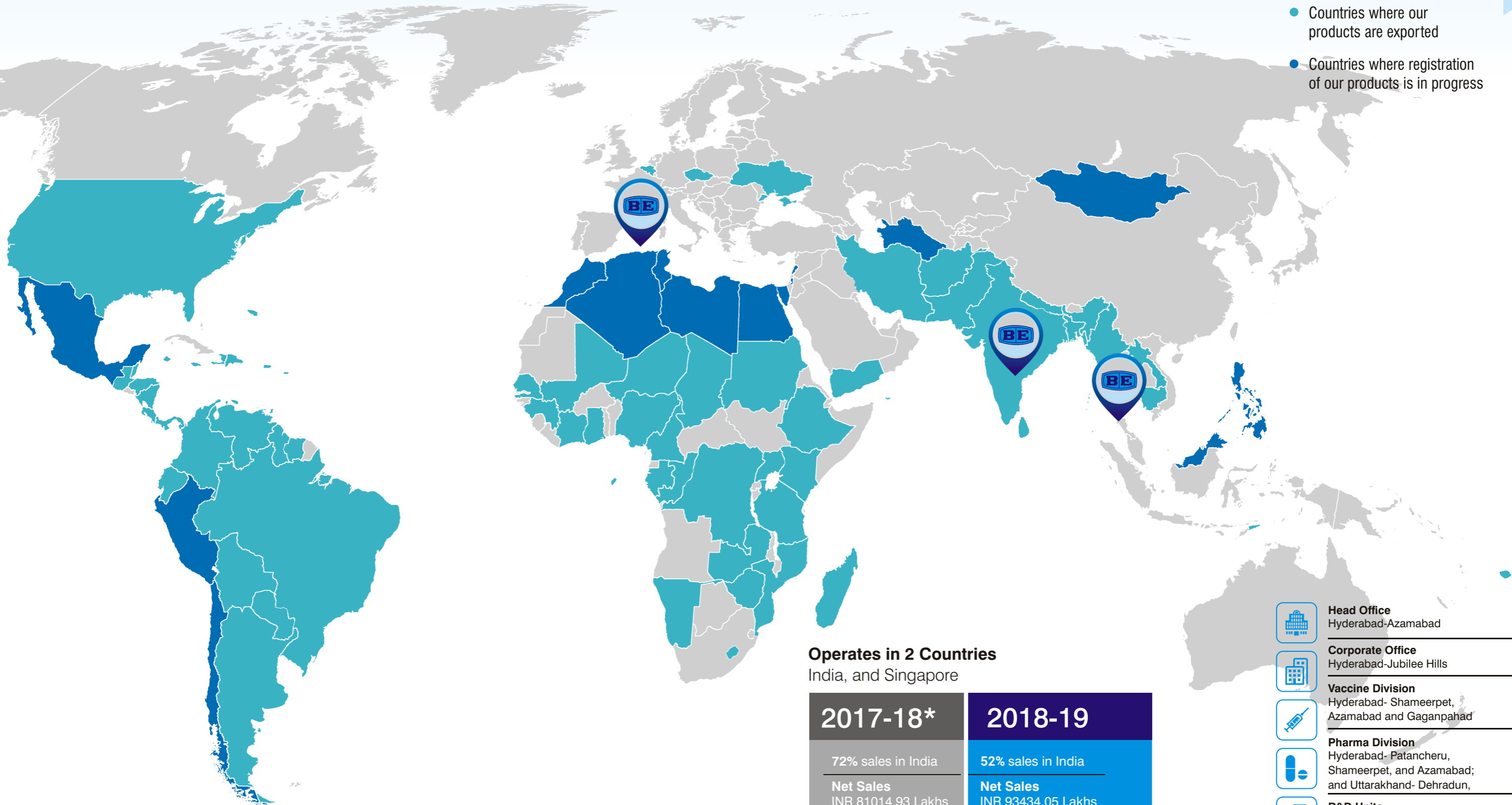


Our presence

We are a private sector company having our footprint across the globe with predominance in India. We currently export our products to many countries across the globe, which includes APIs, Finished Formulations and Biologics.







Offices

-  Countries where our products are exported
-  Countries where registration of our products is in progress

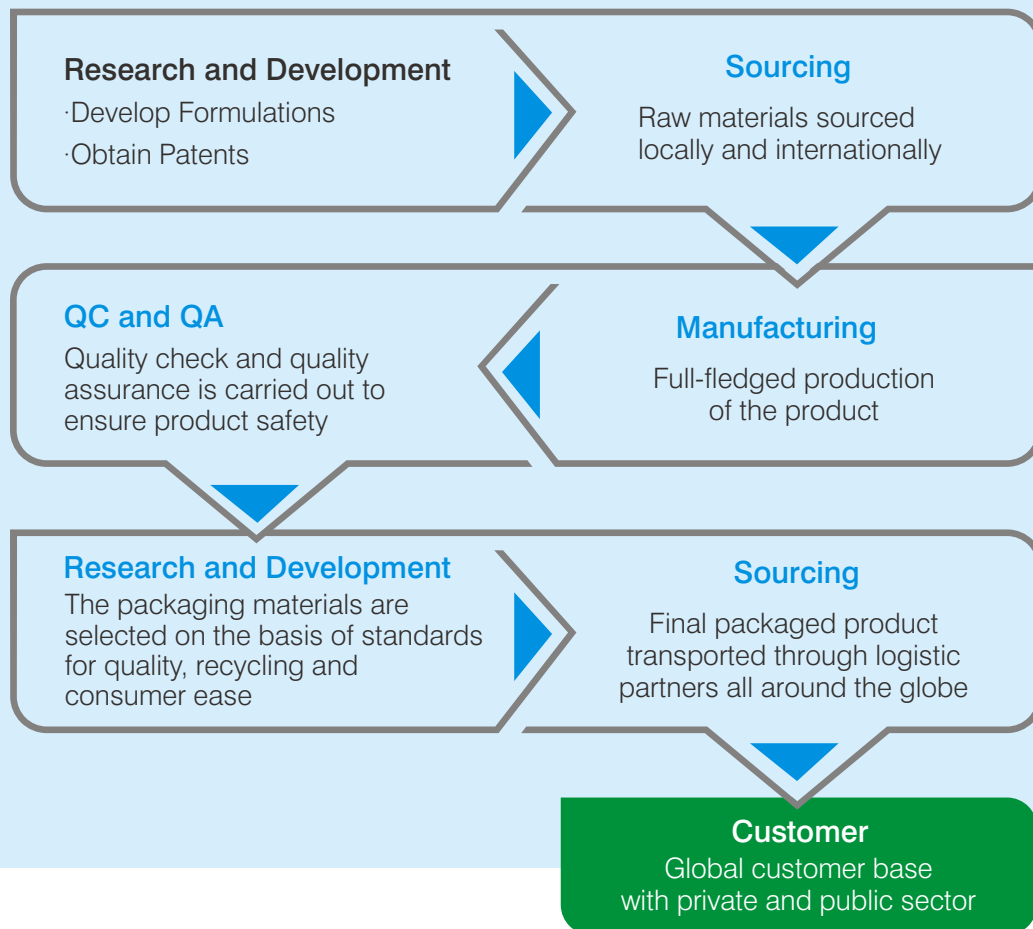


Operates in 2 Countries
India, and Singapore

2017-18*	2018-19
72% sales in India	52% sales in India
Net Sales INR 81014.93 Lakhs	Net Sales INR 93434.05 Lakhs
Equity INR 138832.66 Lakhs	Equity INR 146678.25 Lakhs
Debt INR 59888.59 Lakhs	Debt INR 26609.74 Lakhs

-  **Head Office**
Hyderabad-Azamabad
-  **Corporate Office**
Hyderabad-Jubilee Hills
-  **Vaccine Division**
Hyderabad- Shameerpet, Azamabad and Gaganpahad
-  **Pharma Division**
Hyderabad- Patancheru, Shameerpet, and Azamabad; and Uttarakhand- Dehradun,
-  **R&D Units**
Hyderabad - Shameerpet
Pilot & RD - Vaccine MN Park
Pharma R&D - IKP
-  **Marketing and Sales Office**
Hyderabad, Delhi and Singapore

Our Value Chain



Employee Strength

Commitment and technical expertise of our employees is the basis of our success. We celebrate diversity and drive inclusion at workplace. We recognize and respect different cultures, race, religion and sexual orientation. We are a strong believer of the equal opportunity.

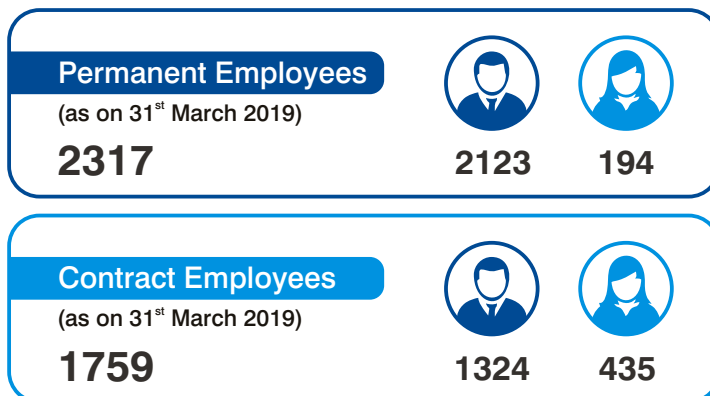
We consider employees to be our single most important asset. We believe that it is important to keep our employees engaged and encouraged through a supportive working environment. We foster a culture that is performance oriented, promotes rewards for results and helps our people grow. Our values have instilled a deeper sense of bond amongst our employees. To maintain an efficient and motivated workforce, we provide a safe working environment, ensure fair Labour practices, encourage employee engagement, and invest in training and development.

Our systematic career management for high-potential and managerial staff fosters and enhances the professional development, enabling us to fill key

positions throughout our locations with qualified specialists. We offer our employees market-driven and competitive remuneration and a clear career path goals. We strive to conduct our businesses in a manner that respects the human rights and dignity of people. Our Code of conduct ensures that all our employees respect human rights of not only each other, but also of the community where we operate.




Our employee strength in FY 2018-19 was 4076, comprising 3447 male employees and 629 female employees. Most people who work in our premises are employed by BE, although, we also employ contract employees, for various activities such as product manufacturing, construction, repair works and logistics. There are no significant seasonal variations in employment numbers. The details of our analysis of employee strength, trainings and other aspects are provided in the subsequent section of report.

Total Employees
(as on 31st March 2019)
4076



Product Portfolio

Our business model has three core dimensions. Through these strategic divisions, we are able to address the needs of the domestic markets as well as international markets in Asia, the CIS countries, the USA, and Latin America.

		
<p>Biologics</p>	<p>Pharmaceuticals</p>	<p>Active Pharmaceutical Ingredient (API)</p>
<p>From its maiden products in classical biologics such as Heparin, we continue to innovate and develop new age genetically engineered biologics. We produce and market a range of pediatric and adult vaccines and has a significant market share in the Indian vaccine market. We bring an enormous breadth of biologics. Our current research focus comprises of developing low molecular weight heparins (LMWH), conjugate vaccines and a portfolio of flavivirus vaccines for unmet needs. Massive investments are underway towards development and commercialization of new products. We are also focusing on developed markets in medium and long term. Key vaccines in pipeline –</p> <ul style="list-style-type: none"> • PCV • MR • TCV • IPV – Hep A and aP based products 	<p>We have a broad range of pharmaceutical formulations – oral dosages as well as injectable. This range of branded formulations encompass therapeutic segments of Non-Narcotic Cough Preparations, Digestive Enzymes and Vitamins, Anti-coagulants and Liver extracts, Anti-Invective's and Antibiotics and Haematenics. We launched key 4 products in the United States. In the domestic market, we successfully launched Enaxatil. We are in the process of establishing partnership with some of the potential customers in the US and EU. We are also looking at filing at least one complex injectable ANDA this year. Some of our key brands include –</p> <ul style="list-style-type: none"> • BE TT • Coscopin • Beparin • Gaspaz • Bethadoxin • Bestozyme 	<p>Strategically, the API division of BE supports the captive consumption needs of the company. Specializing in alkaloids such as Noscapine and its derivatives and biologics such as Heparin, LMWH and PSGAG (Chondroitin Sulphate), BE has committed significant investments to ensure a sustainable quality supply for the global markets.</p>

ComBE Five[®] (Liquid)

(DTwP - rHepB - Hib)



JEEV[®]



BE Td[®]

Diphtheria and Tetanus Vaccine (Adsorbed) for adults and Adolescents I.P.



TRIPVAC[®]

Diphtheria, Tetanus and Pertussis Vaccine (Adsorbed)



Anti - sera



BEVAC[®]
Hepatitis B Vaccine (r-DNA) I.P.



HiBE[®]
Haemophilus Type b Conjugate Vaccine IP (Lyophilized)



Anti – sera



We have eight WHO pre-qualified vaccines, and are constantly undergoing WHO approval processes for new products in our R&D pipeline. The eight vaccines that are WHO Prequalified are the

Pentavalent vaccine (DtwP-rHeb-Hib) in both liquid and lyophilized (freeze-dried powder) forms;
Tetanus Toxoid (TT);
Tetanus and Diphtheria (Td);
Japanese Encephalitis (JE); and
Measles and Rubella (MR).
Biological E ranks as one of the most reliable suppliers for
Liquid Pentavalent Vaccine (LPV) and
Japanese Encephalitis (JE) vaccine.

We are also an exclusive supplier of LPV and JE in India.

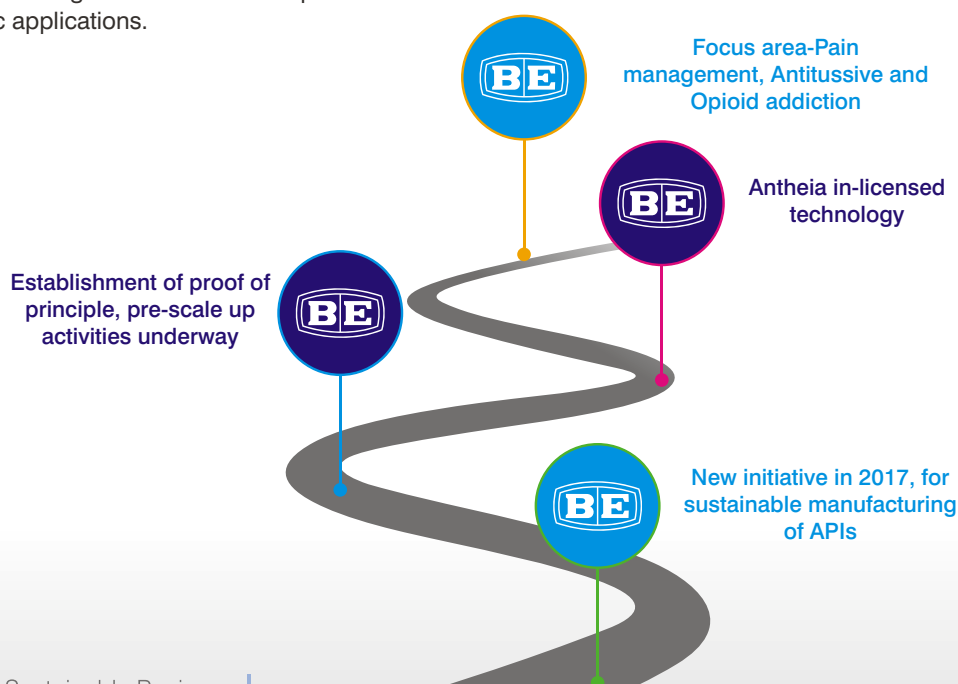
For our newest vaccine, Measles and Rubella (MR), we began the distribution in India in 2019.



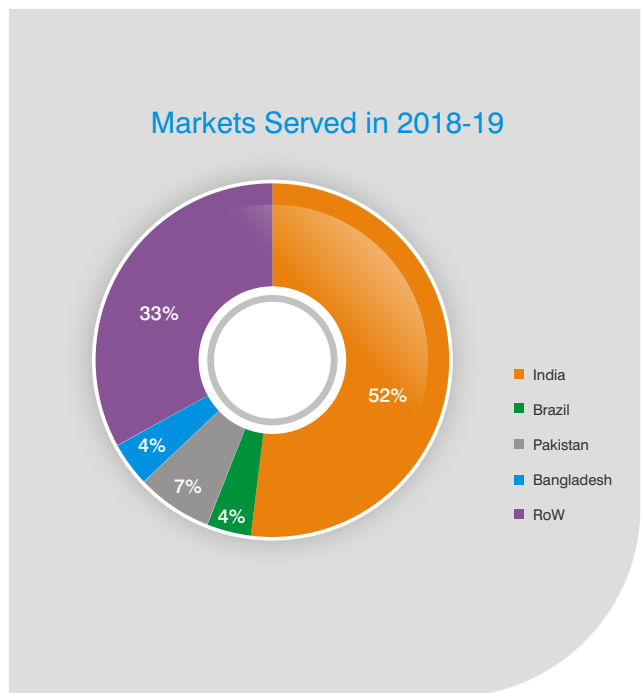
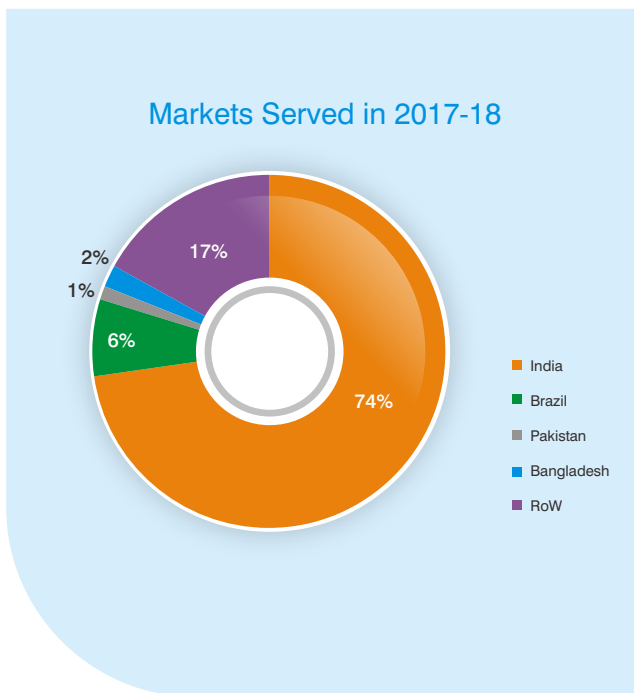
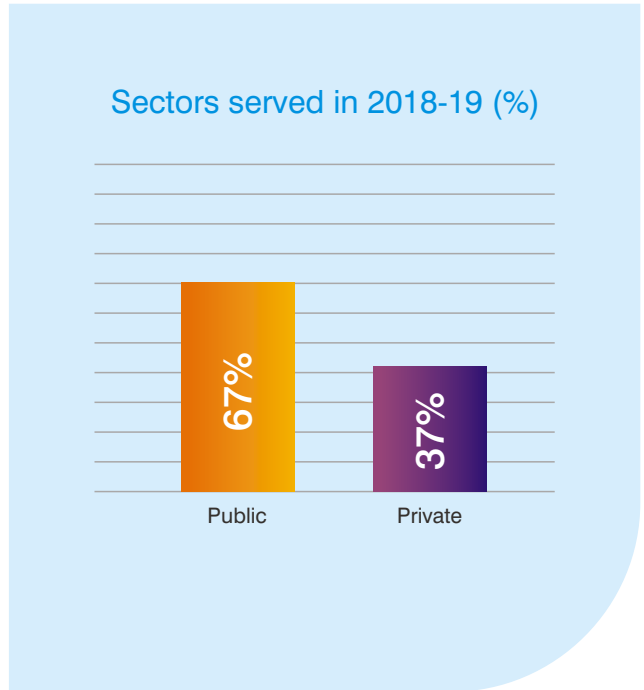
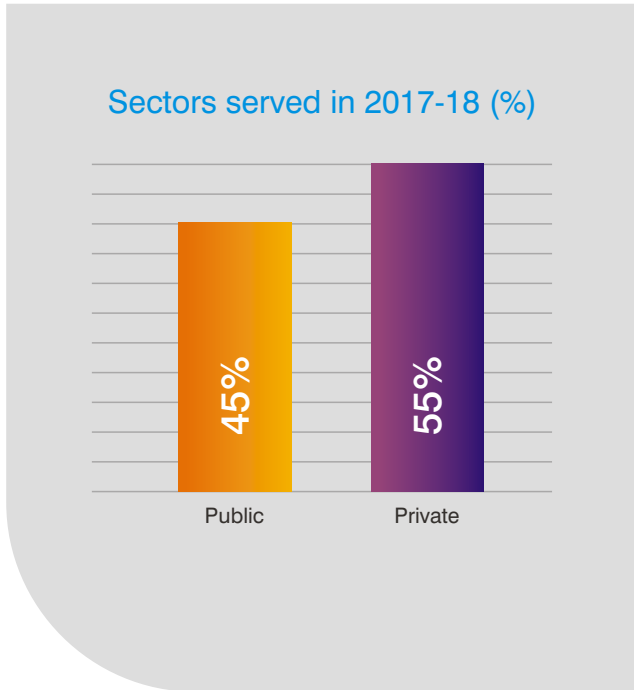
Leveraging Synthetic Biology

As a commitment to sustainable development, we are now integrating a unique green-sustainable approach by using synthetic biology to replace traditional manufacturing practices and create environment-friendly products. This technique amalgamates engineering with biology to develop the biological systems or create a bio-factory. Vaccines, antibodies and modified genes are all products of synthetic biology. Synthetic biology strategies are fast evolving the frontiers of medicine through engineering biosynthetic pathways, gene networks, proteins, and molecular switches for optimizing or enhancing natural cellular functions for in vitro or in vivo medical applications and engineering naturally-existing bacterial, viral, plant and mammalian cells or constructing new cellular entities (i.e. cells or organisms) anew for obtaining novel functional outputs with therapeutic applications.

The key factors driving growth of Synthetic Biology market includes declining prices of DNA sequencing and synthesis, materialization of innovative technologies, growing demand for better-quality drugs and vaccines and advancements in the area of molecular biology. Conversely, there are equal number of factors responsible for hampering growth of Synthetic Biology that includes expensive research protocols, biological safety, bio security concerns and ethical issues. Synthetic biology approaches in particular, usually entails lengthy R&D, validation and optimization, and is also subject to additional regulatory hurdles before they touch the supply chain.



Market Presence in 2017-19

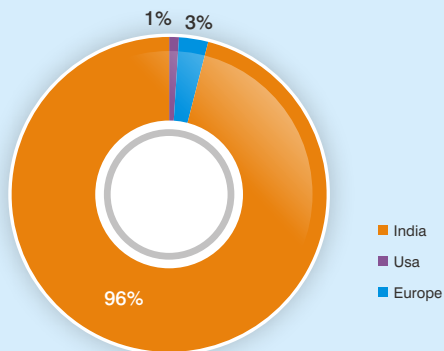


Description	2017-18	2018-19
Total Quantity of Products Sold - Vaccine (in MDS)	325	305
Total Quantity of Products Sold - Pharma (in Crores)	12.87	17.27
Total Production - Vaccine (in MDS)	452	483
Total Production - Pharma (in Crores)	12.54	14.47

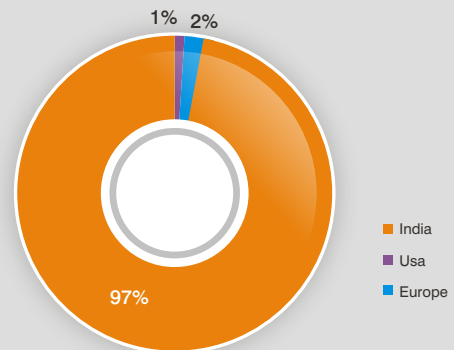
Suppliers Engaged at BE

Description	2017-18	2018-19
Total number of suppliers engaged	1677	1646
New Suppliers	679	407
Total Procurement budget (in INR)	294.78 Cr	572.01 cr
Procurement budget spent on local suppliers (in INR)	185.68 Cr	401.64 Cr

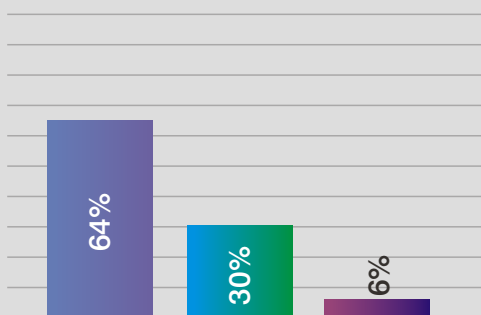
Percentage of Suppliers Engaged in 2017-18



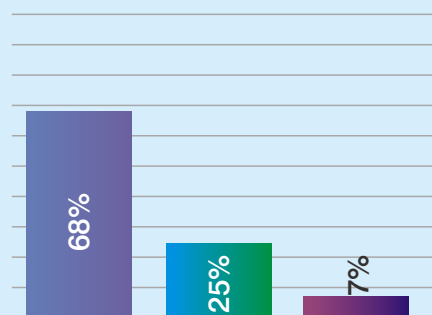
Percentage of Suppliers Engaged in 2018-19



Percentage of procurement budget spent on suppliers in 2017-18



Percentage of procurement budget spent on suppliers in 2018-19





Research and Development

Research and development in the medical science is the process of turning knowledge about a disease at the genetic level into products that treat these diseases or illness. It creates the building blocks for next generation therapies, improved health care and financial development. We believe medical research and development is best expressed as a righteous cycle including investment, innovation and accessibility. Each step of this cycle is critical to sustain the health care ecosystem and to increase our chance of discovering the next revolutionary medicine. At Biological E, we are aware of our role in the health care ecosystem, we continuously strive to be a leader in the therapeutic innovation and pursuing transformational science that may decipher into life enhancing medicines. We conduct research and development so that we can leverage our scientific and technology resources to anticipate health challenges, meet local needs and deliver solutions.

We are a company that innovates for better discovery, diagnostics and delivery. Innovation and new product development are key to advancing in these areas. Since 2008, BE has invested over \$100 million in R&D to successfully develop and deliver key six vaccines. Our majority of the R&D activities are conducted in India and some experimenting activities in France. However in the year 2018-19, we closed down our French unit for strategic reasons.

We also collaborate with institutions, medical centers and companies on R&D programs as to develop affordable medicines which are

easily accessible by the communities in need. We aim to deliver innovation that makes life better and has a lasting impact on human health. We are committed to expand our R&D facility, we do this by focusing on delivering the highest possible quality standards at every stage of the research and development process. We conduct our own extensive pre-clinical research to support our R&D and regulatory programs. This research focuses on efficacy and toxicity models. Our pre-clinical testing facilities are designed to meet GMP regulations and provide for the containment of individual experiments. Our Clinical and Regulatory Affairs department engages in conducting Phase II to Phase IV clinical research programs for international markets, in compliance with ICH-Good Clinical Practice (GCP) guidelines.

In terms of products in the R&D pipeline, we are currently developing Hexavalent, a next generation vaccine, which adds protection against polio to the Pentavalent vaccine, Pneumococcal Conjugate Vaccine (PCV), Typhoid Conjugate Vaccine and Inactivated Polio Vaccine (IPV). As a pharmaceutical company, we are responsible in making our products with utmost quality and innovation to cater the global healthcare needs. We see this as an opportunity to serve people and add value to the society.



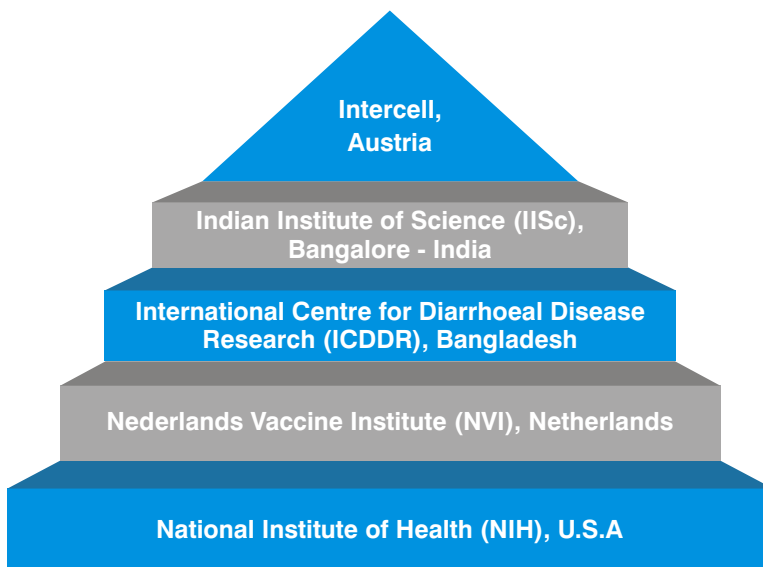
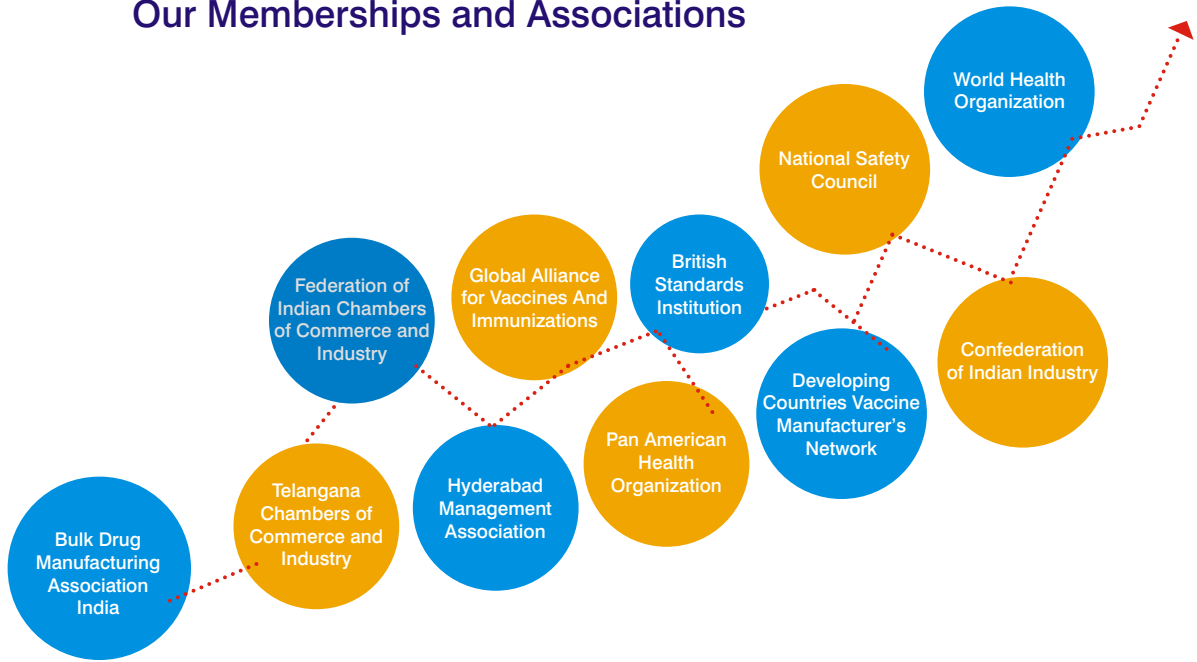
Snapshot of our R&D Center

R&D Workforce	Number of R&D Centers	Area dedicated to R&D (sq. m)
303	3	2232.8
R&D investments (in INR)		
14027.96 Lakhs		

Memberships and Associations

We participate in various trade, industry, and professional organizations that are local, national, and global. Participating in different forums helps us to achieve business goals by enabling us to work with other organizations on issues that affect our industry. Memberships also keep us abreast of industry issues and best practices and provide pathway through which we can contribute to and influence public policy.

Our Memberships and Associations



Precautionary Approach

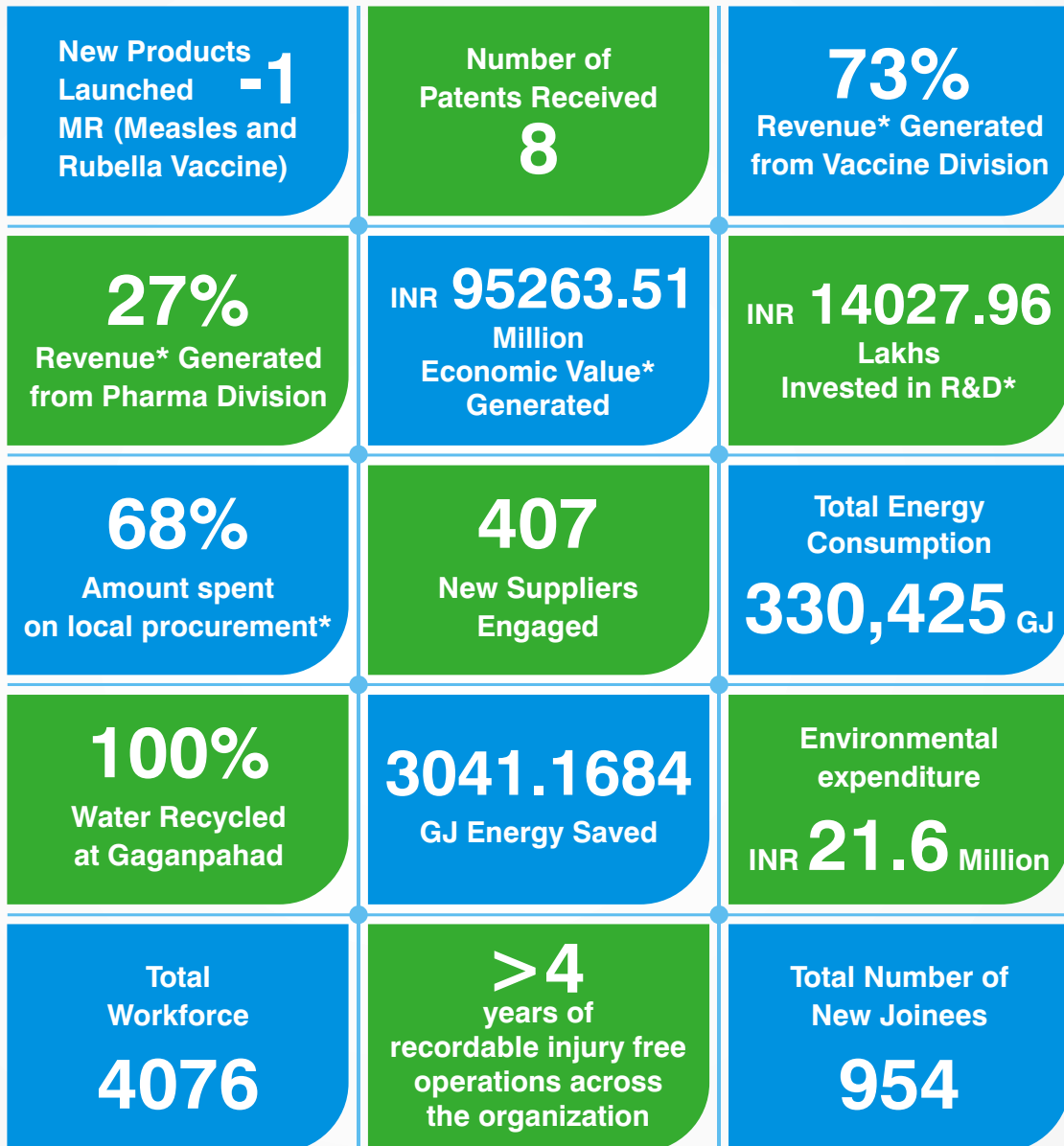
Evaluation of business risk and opportunities is the key to successful business. Our Board level committees and functional heads periodically assesses business risk and opportunities through specified risk management procedures. We have established international standards such as ISO 14001, OHSAS 18001 and ISO 50001 to address our product, environment and safety risks. We have also established an IT security management system to address IT risks.



BIOLOGICAL E AT GLANCE 2019



Biological E at Glance 2019





SUSTAINABILITY AT BIOLOGICAL E

Sustainability is believed to be an integral part of strategic management and corporate planning, at Biological E and therefore incorporate environmental and social aspects into the identification of material topics and prioritization of KPIs. As Sustainability is a fundamental part of our future strategy, all efforts have been made to implement the strategy innovatively which can result in improved revenues. We believe Company's growth strategies, mergers and acquisitions, various operational excellence initiatives at the site level and safety, health, human resource development at the individual level are contributing to the growth of organization.

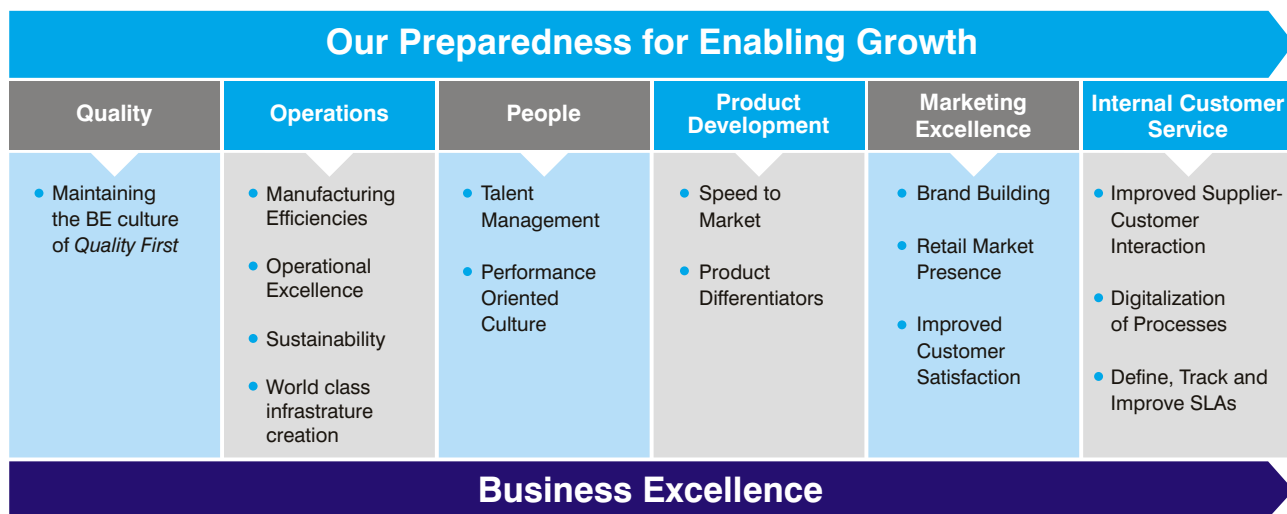
We are committed to our founder's vision of improving the quality of human life thereby having a conscious effort to ensure the means of sustaining our business in all aspects, in an innovative way, to return better stakeholder value. For us Sustainability encompasses a comprehensive and periodic stakeholder consultations to understand their expectations, environmental stewardship, generating economic value and building social capital. We are making a constant effort to understand Sustainability aspects of the various stages of our value chain and increase stakeholder engagement to identify opportunities that meets the critical needs relating

to economic, environmental and social aspects. As part of devising future action plan and sustainability framework, we have identified key strategic challenges.

- ◆ Pricing pressures on some of our key products including LPV, TT, ASVS
- ◆ We anticipate challenges in terms of product development and commercialization given that we have a number of products in pipeline
- ◆ With significant investments happening, we need to up our game and deliver to our fullest potential

These challenges also present us with opportunities to action upon and stay ahead in business.

- ◆ Opportunities to capture markets in attractive products
- ◆ Expect significant margin boosts with foray into developed markets
- ◆ Growth opportunities for everyone with a growing company
- ◆ Exciting times ahead of us as significant sales ramp-up expected for both Vaccines and Pharma divisions in the coming years.

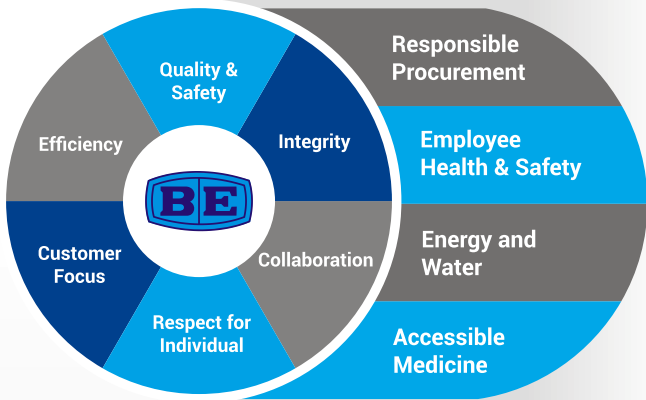


Presently at Biological E, sustainability is an integral part of our Safety, Health and Environment management structure. The overall sustainability performance of the organization is reviewed by the Chief Operating Officer with able assistance of SHE team members. The Safety, Health and Environment (SHE) team has been constituted with the objective of reviewing practices and performance. The function of the SHE team apart from the usual departmental role, also includes:

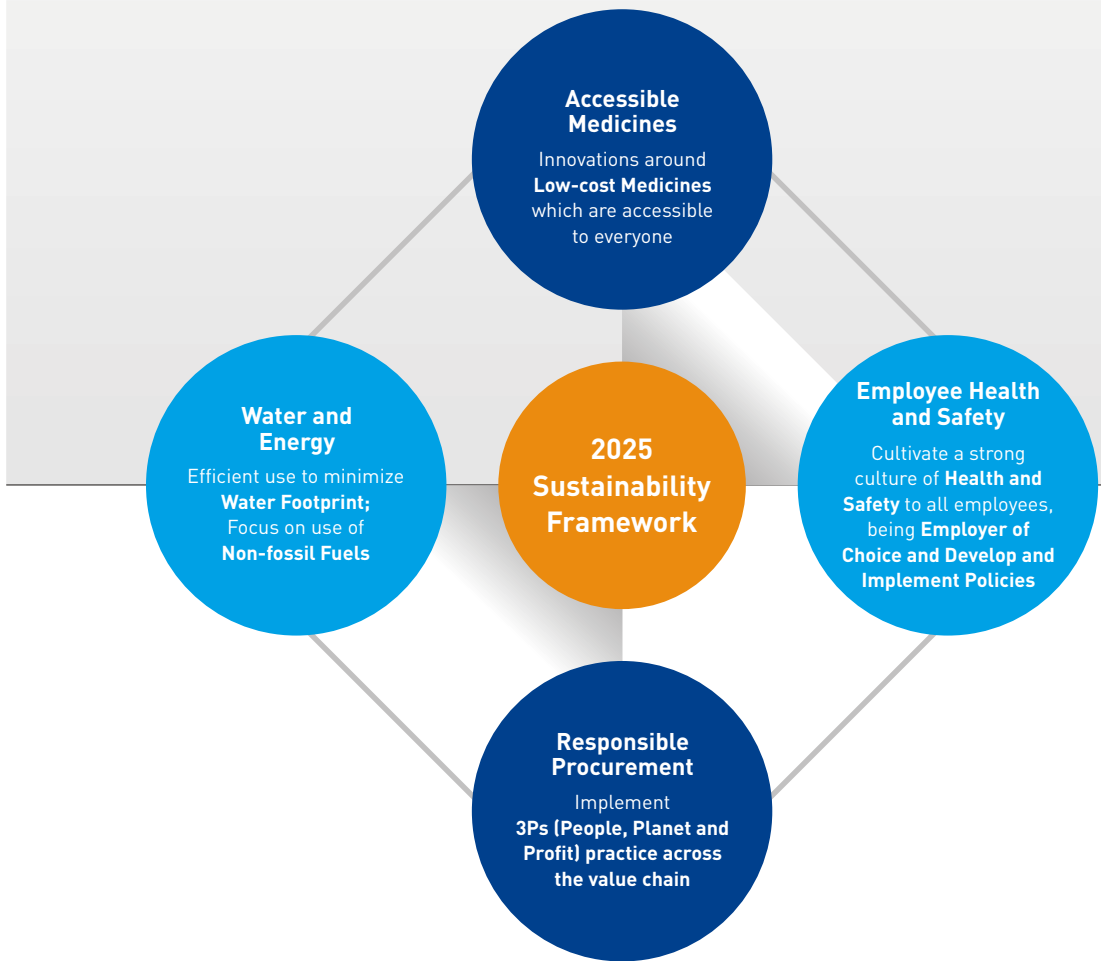
- to develop an all-inclusive approach to safety, health, environmental and sustainability matters
- to provide direction to the organization in carrying out its safety, health, environment and sustainability function
- to oversee the implementation of SHE related guidelines/ policies and

- to review the policies, processes and systems periodically and recommend measures for improvement from time to time

We embrace global best practices in all our processes by adopting leading technological interventions, operational efficiency measures, safe operations initiatives and business ethics. We have strategized to drive our current business through our existing know-how while investing in future endeavors. Our conscious efforts towards responsible investments in upcoming business prospects ensure inclusive growth and development of our business. We are working towards developing our 2025 Sustainability Framework built across four strategic pillars, which will be integrated into our overall business approach.






-  Water
-  Compliance
-  Access to Medicines
-  Customer Satisfaction
-  Product Responsibility
-  Transparent Reporting & Communication
-  Workforce Management
-  Supply Chain Management
-  Effluents & Waste
-  Emissions
-  Energy
-  Health & Safety







Aligning ourselves to UN-SDG

<p>3 GOOD HEALTH AND WELL-BEING</p> 	<p>5 GENDER EQUALITY</p> 	<p>6 CLEAN WATER AND SANITATION</p> 
<p>Core of our Business: Our diversified product portfolio makes us one of the leader in the healthcare business. We are committed to advancing human health and well-being through finding new opportunities to expand the positive impact of our products across the globe.</p>	<p>Women empowerment is essential in expanding economic growth, promoting social development and enhancing business performance. We understand the importance of gender diversity and we are an equal opportunity employer and ensure a gender friendly workplace.</p>	<p>We take rigorous efforts in water conservation and maximize water recycling and reuse. Currently we have achieved 96% of water recycle and reuse at our manufacturing units.</p>

<p>8 GOOD JOBS AND ECONOMIC GROWTH</p> 	<p>15 LIFE ON LAND</p> 	<p>13 CLIMATE ACTION</p> 
<p>We provide unparalleled opportunities to our employees through meaningful career paths. Respecting our employees' contributions is a core part of BE's culture, as is our commitment to helping them fulfill their potential and build rewarding careers.</p>	<p>We are committed to preserve biodiversity of the area we operate and have integrated conservation of biodiversity to our environmental management systems. Our manufacturing facilities have green areas measuring more than 30% which is a home to varied species of birds and insects</p>	<p>Being a responsible brand we are putting structures in place to reduce our GHG footprint and be a part of global framework in achieving emission reduction goals.</p>

Progress Report on Sustainability Goals

Linking Sustainability Strategy	Focus Areas	Short Term Goals (FY 2019-2020)	Long Term Goals (FY 2020-2022)	2017-19 Progress Report
 Accessible Medicines	Investment Invest for developing new facilities and new products	Invest 300 Cr in vaccine business	Invest 1000 Cr in vaccine business for developing new facilities	New facility construction started for vaccine formulations at Shameerpet location with a budget of 225 Crores
	Operation Excellence Implementation of Operational Excellence in all manufacturing facilities	Implement operational excellence in vaccine business	Implement operational excellence in all business divisions	Developing action plans to implement operational excellence in vaccine division
 Water	Water Management Conduct water audits and water balance assessment	Complete water audits and water balance assessment in vaccine business	Complete water audits and water balance assessment in all business divisions	Completed water audits at Shameerpet and Gaganpahad vaccine divisions.
 Employee Health and Safety	Management Systems Implementation of ISO14001 and OHSAS 18001/ISO 45001	Implement both ISO14001 and ISO 45001 in vaccine business	Implement both ISO14001 and ISO 45001 in all business divisions	Completed implementation of ISO14001 and OHSAS 18001 at Gaganpahad vaccine division
	Zero Accidents Continue to focus on Zero Accidents through establishing a comprehensive incident reporting system	Implement in vaccine business	Implement in all business divisions	Achieved >4 years of recordable injury free operations
	Policy Implementation Develop and implement relevant policies on EHS, biodiversity, human rights, and non-discrimination	To develop and implement organization-level policies with respect to EHS, human rights, biodiversity and non-discrimination by 2022		Revised SHE (Safety, Health and Environment) Policy and developed new procedure on Grievance Redressal
	Employer of Choice Become the employer of choice in the pharmaceutical sector	Implement the BE connect concept (Inspire, Ignite and Involve) at Shameerpet facility	Implement the concept of BE connect To be among the top 5 in the healthcare sector by 2020	We launched the Biological E Ltd Employee Engagement Study for 2019 - The BE PULSE!! This helped us to seek inputs covering a multitude of aspects around the job, colleagues, leaders, company practices and processes, performance, career opportunities, and recognition. 96% employees participated in the survey.
 Responsible Procurement	Develop Code of Conduct and Implement 3Ps Practice Develop a supplier Code of Conduct and assess all critical and major suppliers based on environment, health & safety and social practices	Develop and implement Code of Conduct for suppliers	By 2022 commence on-site audits at critical and major supplier facilities based on environment, health & safety and social (EHSS) practices	Drafted Code of Conduct which covers Contractors and Service Providers. 19 of our critical and major suppliers underwent quality audits.
 Energy	Energy Management Implement ISO 50001	Implement ISO 50001 in vaccine business	Implement ISO 50001 in all business divisions	Implemented ISO 50001 at Shameerpet vaccine division. Commenced the implementation of ISO 50001 at Gaganpahad division

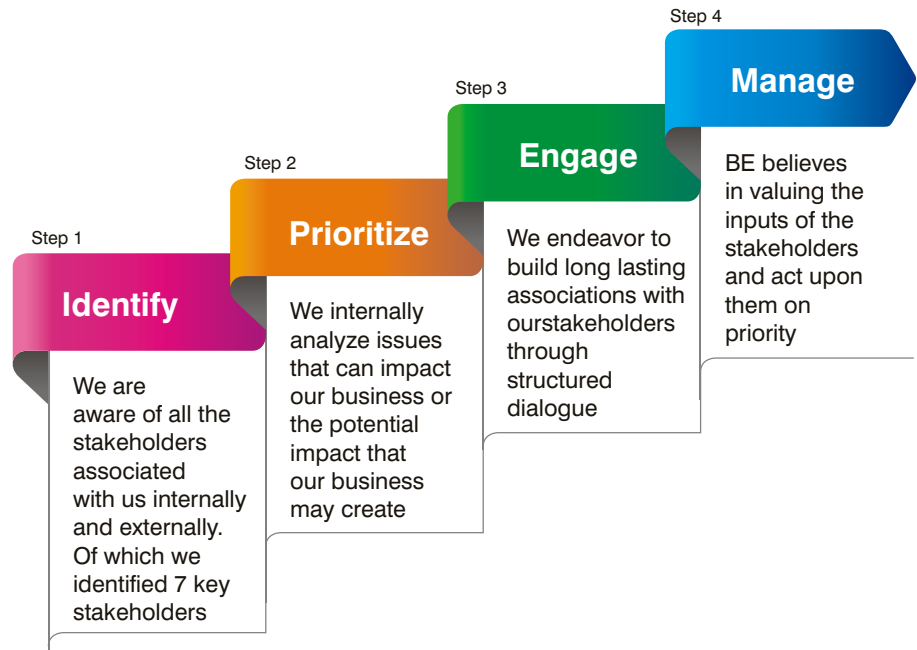
 On-Track  More to do  Achieved



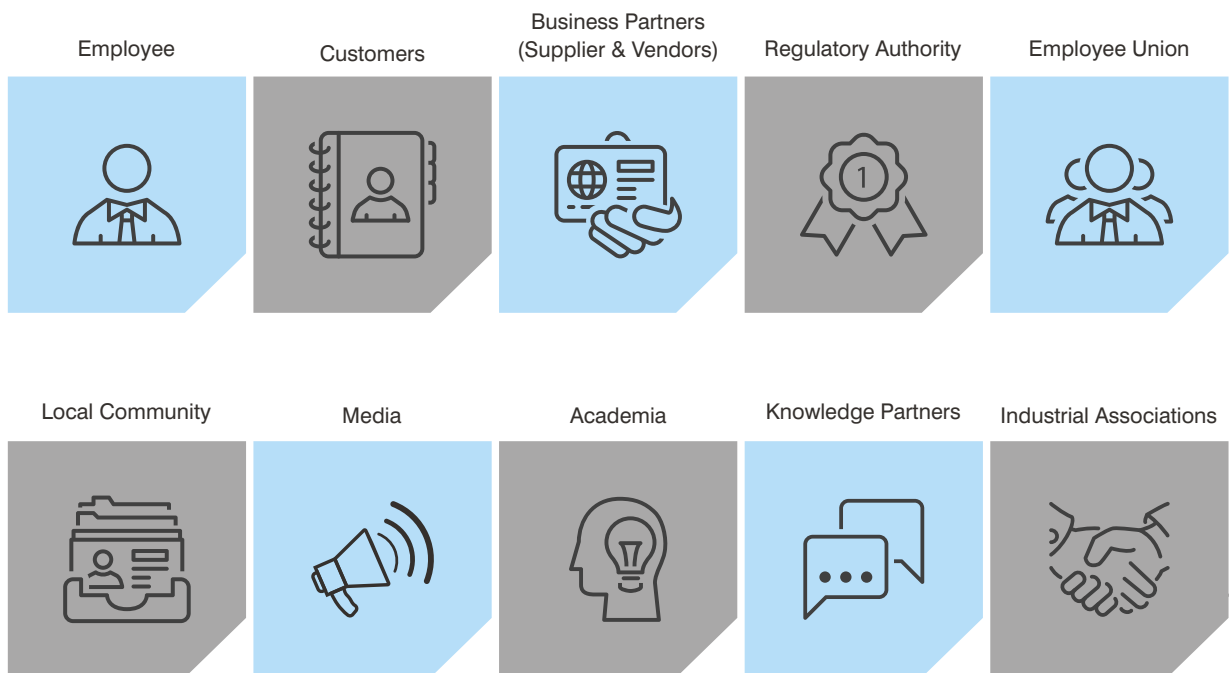
Stakeholder Engagement & Materiality Assessment

Stakeholder Dialogue

We establish and nurture our relationship with appropriate stakeholder groups by instituting trust, transparency and an ethical business culture. This dialogue provides us with an opportunity to understand the views and key expectations of our stakeholders. Additionally, this also helps us with ideas for addressing their concern which in turn strengthens the mutual assurance. Feedback received from stakeholders is assessed to identify critical concerns which are discussed at relevant committee meetings. The responsibility for identifying and addressing these concerns is with the relevant departments.



Our identified stakeholder groups include employees, customers, suppliers, regulatory authority, employee union, local community, media, academia, knowledge partners and industrial association. During 2016-17, we screened key stakeholders and carried out an extensive round of stakeholder engagement sessions focused on developing a detailed materiality matrix for BE. In the reporting period, we did not conduct any stakeholder engagement activity, we intend to carry out this exercise in the year 2019-20 and the results will be presented in our next sustainability report.

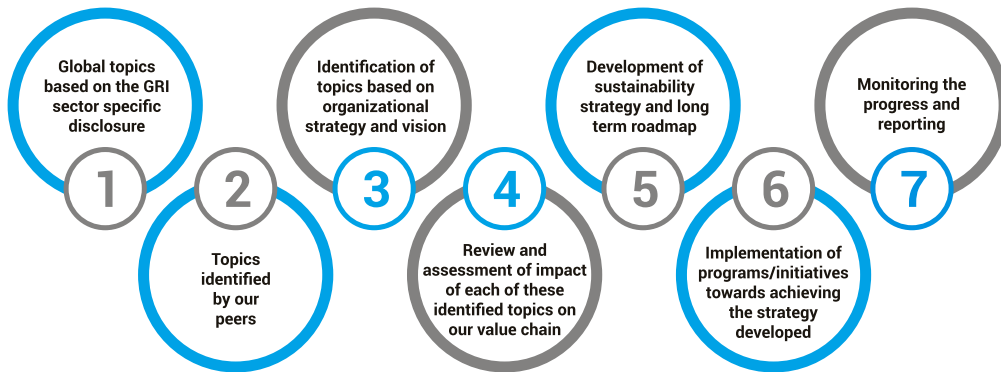




Key Stakeholder Groups	Mode of Engagement	Frequency of Engagement	Key expectations
Employee	Employee satisfaction surveys	Half yearly	Skill development Healthy and safe operations Career progression Employee engagement
Employee Union	One to one meetings	Need based	Periodic communication Equal remuneration Employee friendly policies Safe work environment
Customers	Customer satisfaction surveys	On-going	Product pricing Product availability Quality New product development Timely delivery
Business Partners	Vendor & supplier meets, surveys	On-going	Knowledge and infrastructure support Periodic communication Collaboration opportunities Long term partnership
Regulatory Authority	One to one meetings	Need based	Compliance Community engagement
Local Community	One to one meetings	Need based	Frequent visits Awareness creation Employment opportunities Health related programs
Media	Press releases	On-going	Periodic interaction Future investments Business strategy

Materiality Assessment

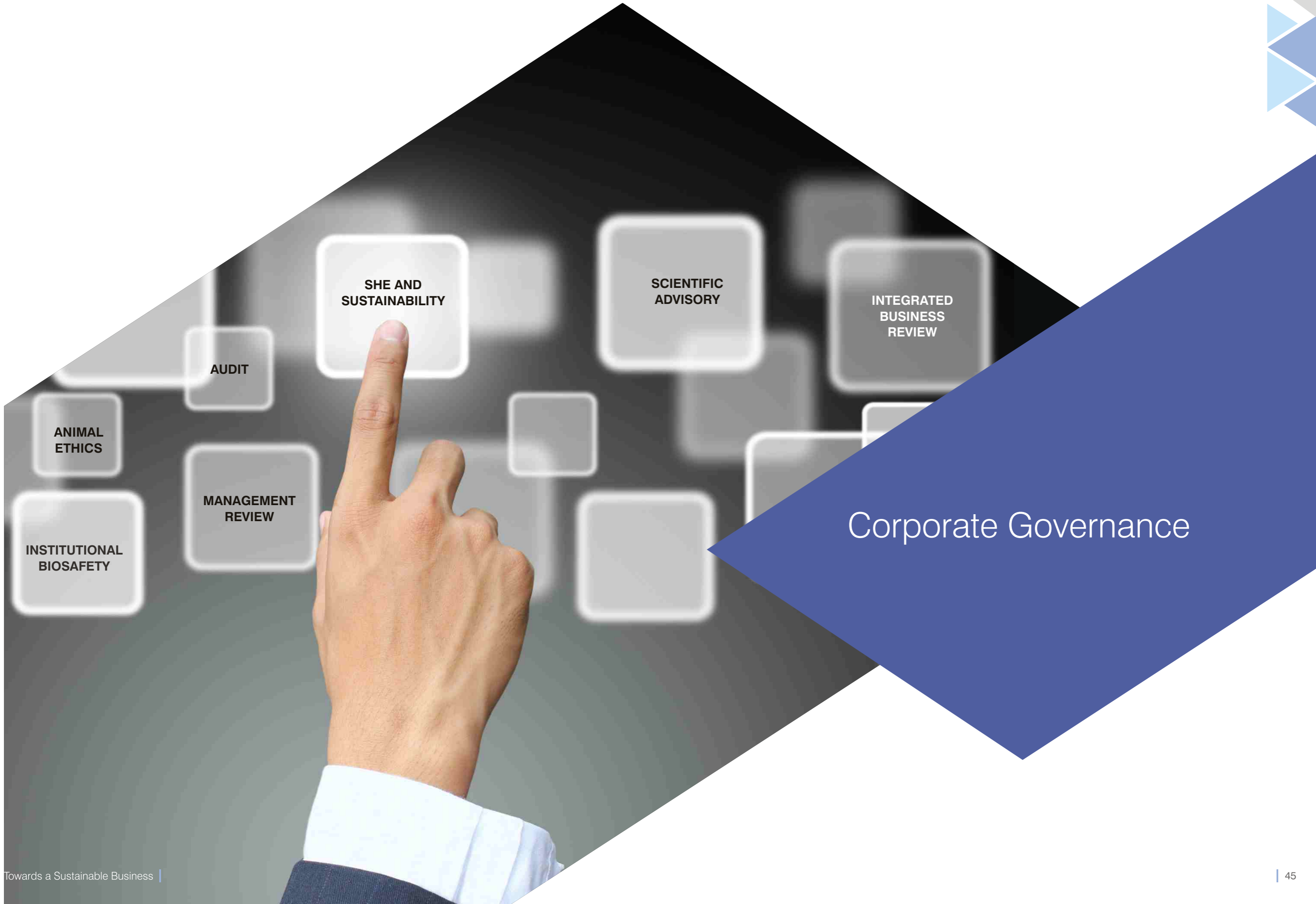
At Biological E, the process of materiality assessment process is deliberated as a practice of continuous improvement and a tool that helps us define our sustainability strategy. Our approach to materiality assessment is through a structured process.



We identified the topics material to us based on stakeholder views and an assessment of their impact to our business. The assessment was done in the year 2016-17. As a part of this process we assessed external stakeholder perspectives as well as emerging sustainability issues. The issues that emerged from the process are those that significantly impact the long-term viability of our business. In the reporting period, we did not conduct the material assessment though we have reviewed our material topics for its relevance and appropriateness in the current scenario, based on industry practices and in consultation with senior management. We revised one of the material topic “affordable medicines” to “access to medicines”, based on the views of senior management and key customer groups.



Material Topics	Aspect Boundary	Report Coverage
Water	Internal	Environmental Footprint
Compliance	Internal	Environmental Footprint
Access to medicine	External	Research and Development
Product responsibility	Internal and External	Social Footprint
Customer satisfaction	External	Social Footprint
Transparent reporting & communications	External	Social Footprint
Energy	Internal	Environmental Footprint
Emissions	Internal	Environmental Footprint
Effluents & waste	Internal	Environmental Footprint
Supply chain management	Internal and External	Responsible Sourcing
Health & safety	Internal	Social Footprint
Workforce management	Internal	Social Footprint



Corporate Governance

Robust governance system is central to creating sustainable value at Biological E. While we focus on creating and sustaining value, we also ensure that it is steered in alignment with our defined policy framework for ethical conduct of business. The six core values viz., respect for individual, integrity, efficiency, collaboration, customer focus and quality & safety are the pillars which instill ethical business practices. Good governance encompasses a set of methods and practices to ensure that our business affairs are being accomplished in a suitable manner to restate accountability, transparency and fairness in all our transactions. These methods and practices help us in governing duties and responsibilities of the Board, understanding interests of our stakeholders, conducting our business with integrity as well as ensuring transparency and fair disclosure of our performance. We intend to develop a policy framework that meets stakeholders' aspirations and social expectations.

We have adopted sustainability as a pathway to enhance our performance across triple bottom line. And our effective governance structure helps us to demonstrate our sustainability performance to our stakeholders and maintain a good relationship with them. It also helps us identify risks and opportunities across the triple bottom-line. Our governance committee develops strategy to meet corporate goals. Based upon the strategic plan, the governance committee formulates various frameworks to attain these.

Our governance is overseen by our Board of Directors comprising of highly qualified professionals with a wide range of expertise and skills. In the year 2017-19, BE's Board consisted of three members. Board exercises authority in designing a basic framework of structure and delegates substantive powers to Managing Director. The entire senior management team directly works with Managing Director. The execution of strategy, allocation of reward and award practices, retention of talent, encouraging innovation, hard work, and developing leadership etc. are all the functions of Senior Management. The senior management is given full functional freedom and autonomy to operate and they will be made accountable for their individual function's operational targets. The Board meets regularly to discuss achievements, risks and opportunities, environmental, economic and social impacts with all the functional heads accompanied by the finance and market team heads to get an overview of the Company's performance. Our governance process is designed to keep all Board members informed about the significant economic, Environment and social issues which can impact the company.

We manage, monitor and report on the principal risks that can impact our ability to achieve our strategic objectives. We are establishing a Risk Management Framework across our operations with a purpose to identify all possible risks and ensure business stability. The risk team will analyze our risk profile and maintains the risk management framework. Additionally, the level of risks shall be controlled by the risk management process. The Audit team provides an independent assurance to the Board, through its Committees for the system of risk management and internal control.

In order to expand our circle of impact and make a difference in larger section of the industry, we have a representation across business and industrial associations. This helps us gain an all-inclusive understanding of our stakeholders' expectations and provides us an opportunity to share our experiences, capabilities and resources with industry bodies, academia and other relevant organizations. It is our persistent efforts to adopt the best corporate governance practices, keeping in view the international codes of corporate governance and practices of global companies.

The image shows a graphic for the SHE Policy. At the top left is a circular logo with 'SAFETY', 'HEALTH', and 'ENVIRONMENT' around a central figure. At the top right is the BE logo and the text 'Biological E. Limited Celebrating Life Everyday'. Below this is the title 'SHE POLICY' and the statement 'BE is committed to:'. A list of 12 bullet points follows, detailing the company's commitments to safety, health, and environmental protection. At the bottom right, there is a signature and the name 'Mahima Datta, Managing Director'.

SHE POLICY
BE is committed to:

- Prevention of Environmental Impacts, Hazards and Risks while Developing, Manufacturing, Storing, Handling and Distributing products.
- Providing training and dissemination of information to all employees to take individual responsibility for Safety Health & Environment (SHE) and to create a culture of continual improvement.
- Develop and instill the importance of SHE as value addition to all stakeholders.
- Instilling a sense of duty in every employee towards personal safety and safety of others who may be affected due to operations.
- Ensuring safe handling, storage, usage and disposal of substances and materials that are hazardous to health and environment.
- Providing safe working environment for our employees, contractors, visitors and other stakeholders.
- Encourage all employees to report all incidents including near misses and minor cases.
- Making all the stakeholders aware that SHE is a tool for best operational efficiency.
- Make all the stakeholders to endeavour, comply with SHE practices as a strategic imperative to maintain/improve the competitive position of the company.
- Protect the environment which includes sustainable resource use, climate change, mitigation and adoption, protection of biodiversity and ecosystem.
- It is BE's endeavour to institute and implement periodical reviews of SHE objectives and targets to ensure compliance with laid down policies, procedures, applicable legal and other requirements for continual improvement of SHE Management system to enhance SHE performance.

Mahima Datta
Mahima Datta
Managing Director

Board Committee	Function
 <p data-bbox="197 454 424 510">Scientific Advisory Board (SAB)</p>	<p data-bbox="523 315 1401 488">Our Scientific Advisory Board consists of distinguished academic and industry researchers who are involved in conducting the scientific and technological review of all the Research and Development activities undertaken by us internally. SAB meetings are organized to discuss the solutions to problematic areas, way forward in R&D and helps provide an “open market” view of where the organization should focus to be competitive in the market.</p>
 <p data-bbox="177 730 443 786">Institutional Biosafety Committee (IBSC)</p>	<p data-bbox="523 562 1422 790">This is a Statutory Committee that operates from the premises of the institution. The committee includes the Head of the Institution, Scientists engaged in DNA work, a medical expert and a nominee of the Department of Biotechnology. The occupier or any person including research institutions handling microorganisms/genetically engineered organisms shall prepare, with the assistance of the Institutional Biosafety (IBSC) an up-to- Committee date on site emergency plan according to the manuals/guidelines of the RCGM and make available copies to the District Level Committee/State Biotechnology Co-ordination Committee and the Genetic Engineering Approval Committee.</p>
 <p data-bbox="188 976 427 1066">Integrated Business Review (IBR) Committee</p>	<p data-bbox="523 909 1347 992">The IBR Committee is currently responsible for organizing quarterly performance review of various functions of the management. This review team discusses the quarterly progress of different annual goals set.</p>
 <p data-bbox="201 1256 419 1346">Institutional Animal Ethics Committee (IAEC)</p>	<p data-bbox="523 1111 1406 1395">We are committed to implementing 3R (Replacement, Reduction and Refinement) in animal testing. Experiments on animals in course of medical research and education is covered under the provisions of the Prevention of Cruelty to Animals Act, 1960 and Breeding of and Experiments on Animals (Control & Supervision) Rules of 1998, 2001 and 2006 framed under the Act. These are enforced by the Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA), a statutory body under the Prevention of Cruelty to Animals Act, 1960. The IAEC has been constituted under these provisions. The committee comprises of a group of distinguished persons for the purpose of control and supervision of experiments on animals performed in the organization.</p>
 <p data-bbox="244 1581 376 1637">Audit Committee</p>	<p data-bbox="523 1447 1390 1641">The Chairman of the Committee is an Independent Director. The Chief Financial Officer, the Head of Internal Audit and the representative of the Statutory Auditors are the invitees to meetings of the Audit Committee. The Head of Internal Audit, who reports to the Audit Committee, is the Coordinator, and the Company Secretary is the Secretary to the Committee. The representatives of the Cost Auditors are invited to meetings of the Audit Committee whenever matters relating to cost audit are considered.</p>
 <p data-bbox="228 1798 392 1888">SHE and Sustainability Committee</p>	<p data-bbox="523 1700 1390 1895">This committee is headed by the COO and the HODs of the department as members and its core responsibilities and strategies are presented by the HOD of the SHE and Sustainability Department, this committees major responsibility is to review the SHE management system performance and statistic overview, this committee meetings also includes the internal and external audit compliance with regulatory and statutory complaints in coordination with the sustainability goals and SHE objectives for the coming year.</p>
 <p data-bbox="228 2040 392 2096">Management Review Board</p>	<p data-bbox="523 1953 1378 2067">This board is chaired by the MD and it mainly focuses on discussing the key quality, external audits, product complaints, product details, vendor qualification, stability studies, clinical studies and major deviations and CAPA's all these reports are presented by quality head in the presence of the other department HODs.</p>

Business Ethics

Since our inception, we strongly believed that every employee is a trustee of our stakeholders and must strictly adhere to a Code of Conduct and conduct himself/ herself at all times in a professional and ethical manner. We perform our activities in compliance to the applicable national law and regulations. Our employee code of conduct and ethics standards clearly defines the guidelines for employees on dealing with people within the organization, ensuring a gender friendly workplace, relationships with suppliers and customers, legal compliance, health & safety, avoidance of conflict of interest, transparency in all their actions, protection of confidential information, etc. We regularly conduct awareness sessions for our directors and employees on our ethical standards.

The Code of Conduct and Ethics that the Company has developed is the foundation upon which the company has been built. All the new employees joining the company are given a clear understanding of this aspect as the base upon which all the other work is built on. The Mission, Vision and the Values of the Company are percolated all the way down even in the Goal setting exercise.

The various modes adopted to communicate the Code of Conduct and Ethics to our workforce are - employees receive frequent trainings, mailers and other communication from the top management that repeatedly reminds them about the responsible way of working. All the employees on joining the company are inducted with an introduction to the values and the ethics of the company. Only after receiving an authorization from the trainer, the person is permitted to join the team. If a member of the workforce is found to be involved in corrupt practices which when validated with evidences, appropriate remedial measures are taken.

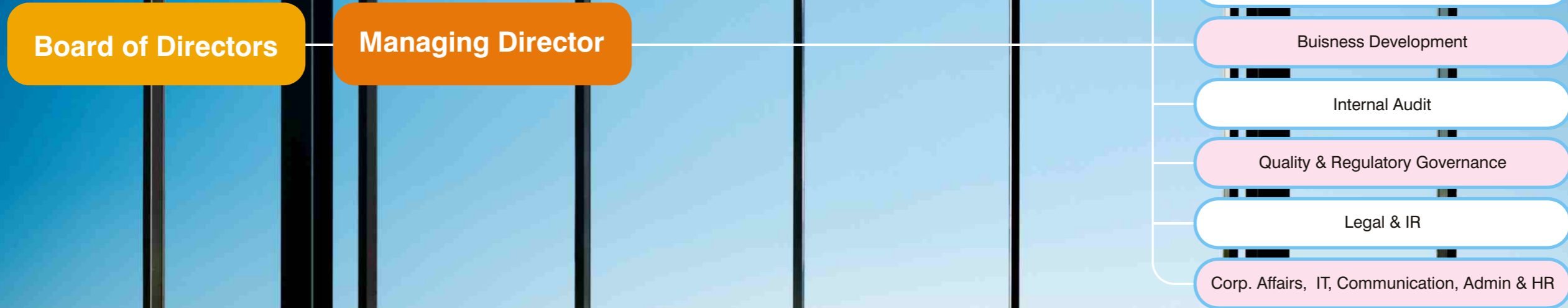
Grievance Redressal Mechanism

For a dynamic and challenging work environment it is essential to have an effective process for reporting and addressing employee disputes and complaints. We have developed a systematic procedure to resolve employee grievances with reference to The Industrial Dispute Act, 1947. This procedure is conveyed to all employees during their induction period as well as it is also accessible through employee portal "BEEP" (Biological E. Employee Portal). It is the primary responsibility of HRD function to ensure that the grievance redressal mechanism is effectively implemented. Our grievance mechanism pertains to matters such as discrimination based on gender, race, color, region, age, marital status and disability, unfair treatment, working conditions, leave denial, issues within team and interpretation of policies and rules.

Our grievance mechanism does not handle issues such as employee termination, sexual harassment and compensation related issues. We have a designated grievance redressal committee at an organizational level consisting of 3 members one from HRD and other two at a level of senior manager/ functional head. The committee investigates the matter on the basis of evidences obtained and addresses the issue within 7 days of submission of grievance in written format. Documentation is handled by the HR which consists of preparation of grievance checklist guidance and list of grievance redressal committee members, filling of grievance register and finally preparation of grievance redressed report. The documents for each of the grievances addressed is filed and made available in soft copy and hard copy with HRD. A copy of documents is sent to Industrial and Employee relations team at the head office on a half-yearly basis for their review and recommendations to Head HRD.



Our Organizational Hierarchy





Environmental Footprint



Environmental Footprint

Our primary environmental sustainability goal is to reduce our environmental impact so as to ensure a safe and healthy environment for present and future generations. We take actions to mitigate and reduce our impact on the environment in multiple areas of our business. We are conscious of the rising global concerns about environmental sustainability. Our goal is to transform our operations into one that delivers low carbon emissions, energy efficiency, natural resource preservation and protection of biodiversity.

We are committed to carry out periodic reviews of our processes to identify areas of potential adverse environmental impact and mitigate them as efficiently as possible. We understand that a responsible management of our environmental footprint would be the overall interest of the communities where we operate. Environmental footprints from our operations arise mostly from our water consumption, energy consumption, emissions, and effluents and waste. We measure our performance with respect to a broad range of environmental topics such as energy consumptions, biodiversity, greenhouse gas emissions, water management, effluent and waste management. During the reporting period we undertook construction of new blocks at Shameerpet. This resulted in increased consumption of resources and waste generation. Our commitment to good environmental practices is outlined in our Sustainability Framework.

We are focused on implementing energy, water, waste and emission reducing initiatives. We address the impact of climate change across our value chain and remain focused to reduce environmental footprint across our operations and products throughout their life cycle. We have adopted ISO 14001 and ISO 50001 at our Shameerpet and Gaganpahad facility.

As our business continues to grow, we are working persistently to meet heightened demand in ways that consume less energy, less water and produce fewer emissions.





Water Stewardship

The global demand for water has been increasing at a rate of about 1% per year over the past decades as a function of population growth, economic development and changing consumption patterns, and it will continue to grow significantly over the foreseeable future. 40% shortfall of the available global water supply is expected by 2030, according to the UN. Water is an integral part of our operations. With our facilities operating in a water stress area we are fully committed to minimize our water consumption and promoting water conservation. We recognize the importance of access to fresh water and the need to effectively manage water discharges at all our operations.

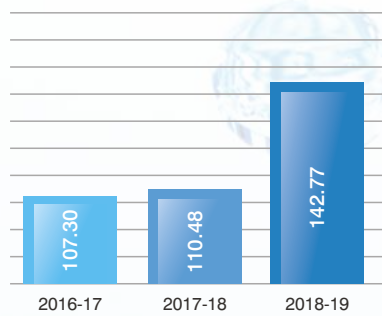
At Shameerpet vaccine division, our water withdrawal increased by 3% in 2017-18 and 112% in 2018-19 this massive increase was due to construction of new facilities. At Shameerpet Pharma division, we saw 51% increase similarly at our Gaganpahad facility the water withdrawal increased by 66% in 2017-18. Each of our facilities has a role to play in meeting our water use reduction goals. Tools have been developed to assist our manufacturing operations to identify, assess and prioritize water projects, and to capture water savings, financial savings and water quality improvements. By routinely mapping the water balance across our activities, we are continuously seeking to reduce our consumption, therefore reducing demand on municipal water.



Shameerpet Vaccine

Material Topics	Units	2016-17	2017-18	2018-19
Municipality Water	KL	107295	110475	142769
Tanker Water - Third Party	KL	0	0	0
Ground Water (bore well)	KL	0	0	0
Total Water Withdrawal	ML	107.29	110.47	142.77

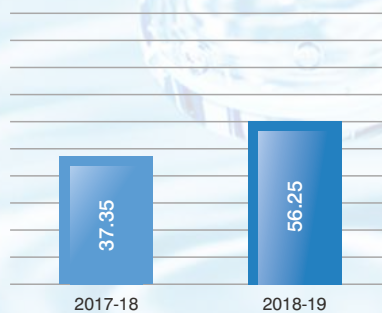
Total Water Withdrawal in ML



Shameerpet Pharma

Source of water	Units	2017-18	2018-19
Municipality Water	KL	0	18992
Tanker Water - Third Party	KL	37347	37256
Total Water Withdrawal	ML	37.35	56.25

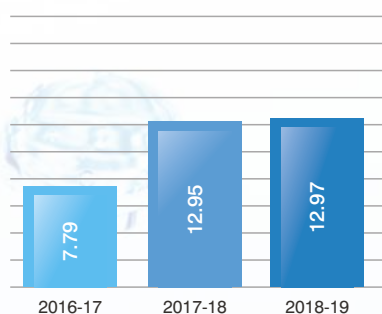
Total Water Withdrawal in ML



Gaganpahad

Material Topics	Units	2016-17	2017-18	2018-19
Tanker Water - Third Party	KL	0	8940	9660
Ground Water (bore well)	KL	2323	4011	3306
Surface Water	KL	5470	0	0
Total Water Withdrawal	ML	7.79	12.95	12.97

Total Water Withdrawal in ML

**Steam Recovery at Shameerpet**

Recovery of lost heat from flash steam at various points. Installation of shell and tube heat exchanger led reduction in use of energy and avoid heat loss. This additional heat gained reduces the heating required for the boiler feed water. This helped us to save around 121 KL of HFO amounting to 43 Lacs per annum.

Water Conservation at Shameerpet

Fixing of water flow aerators for the taps in washrooms and canteens to control the flow volume of the water and subsequently avoid water wastage. This helped us to save around 3387 KL of water amounting to 3.04 Lacs per annum.

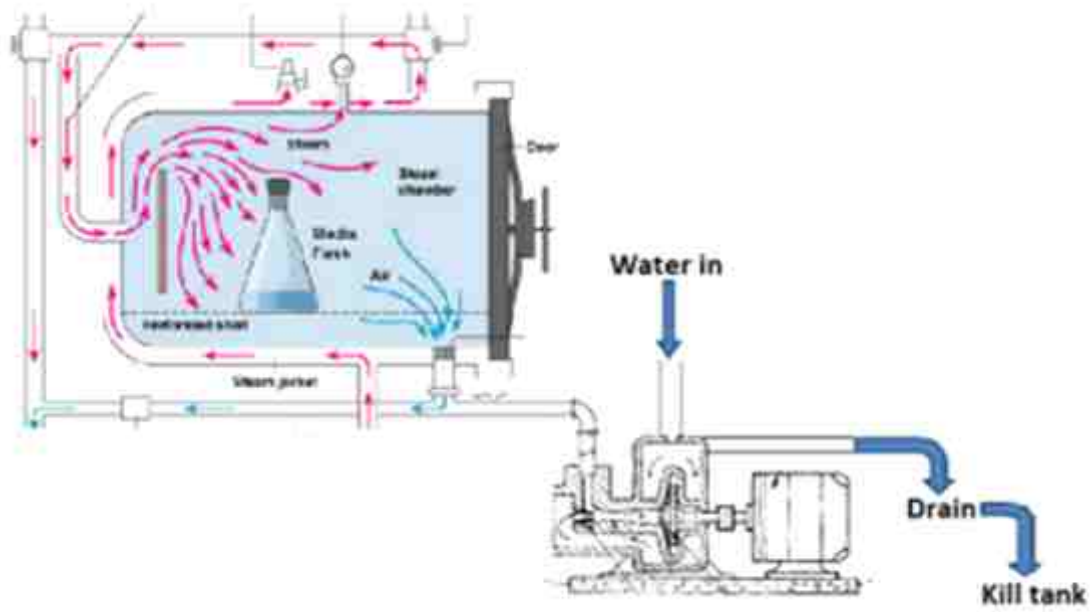
**Installation of foot mounted Pneumatic valve in RVB Washing Area at Shameerpet**

In RVB wash area, around 75 no's of glass bottles of different capacities are cleaned everyday using Purified water followed by WFI water. Initially, there was manually operated valves where water wastage was observed. After identification of this gap, foot mounted pneumatic valve is installed in wash area. On an average it takes 169 min of purified water flow for washing, purified water flow per min is 23 litres which is 3887ltrs per day, savings of approximately 33 min flow is observed that is 756 litres. Also, on an average it takes 81 min of WFI flow for washing, purified water flow per min is 23 litres which is 1863 litres per day, savings of approximately 16 min flow is observed that is 368 litres. Considering two shift operation on an average of 80% of production operation purified water saving is almost 36,432 litres per month costing approximately INR 91,080 and WFI water saving is almost 17,664 litres per month costing approximately INR 70,576.

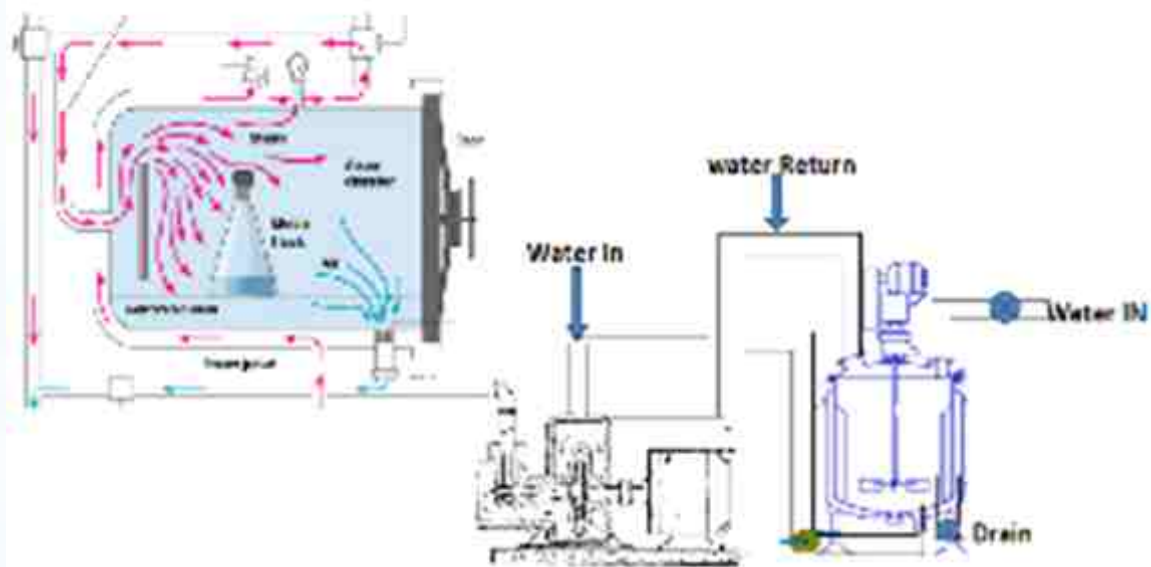
Reducing the Water, Energy and Man hours at AIC MB suite at Shameerpet

Water wastage reduction by installing a 50L vessel and recirculating the water during the sterilization cycles through pump, which otherwise would have drained as wastewater. Drain the water from the recirculation loop after every three autoclave cycles to reduce the heat generation in the tank. This helped us in saving 1.7 KL in every three autoclave cycle and INR 18 lakhs in the span of six months.

Before



After



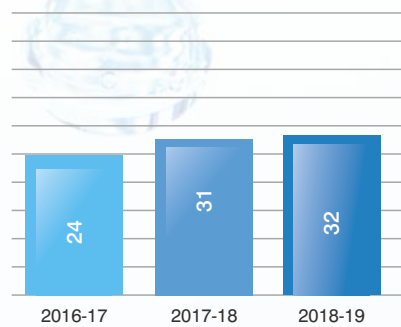
We manage our operations to minimize the release of pollutants to surface waters going beyond compliance by keeping our discharges well below regulatory limits. We are committed to the 'reduce, reuse and recycle' principle, as a way of significantly reducing the wastes that we generate and ensuring their responsible disposal. We have installed wastewater treatment plants to handle both industrial and domestic wastewater at all our operational facilities. We are also continuously improving our wastewater treatment facilities which would help us in recycling and reusing treated wastewater at a higher percentage.

Description	Units	Shameerpet (Vaccine)	Shameerpet (Pharma)	Gaganpahad
ETP Capacity	KLD	300	125	50
STP Capacity	KLD	100		

Shameerpet Vaccine

Destination of discharge	Units	2016-17	2017-18	2018-19
Total Wastewater Generated	ML	24	31	32
Total treated water discharged- Gardening	ML	2	20	21
Total treated water discharged- CETP	ML	21	16	16
Total Volume of water recycled and reused	ML	2	15	16
Percentage of water recycled and reused	%	1.9	48.38	50

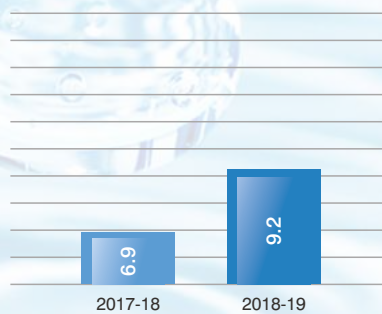
Total Wastewater Generated in ML



Shameerpet Pharma

Destination of discharge	Units	2017-18	2018-19
Total Wastewater Generated	ML	6.9	9.2
Total treated water discharged- Gardening	ML	0.1	0.1
Total treated water discharged- CETP	ML	6.7	9.1
Total Volume of water recycled and reused	ML	0.1	0.1
Percentage of water recycled and reused	%	0.5	0.2

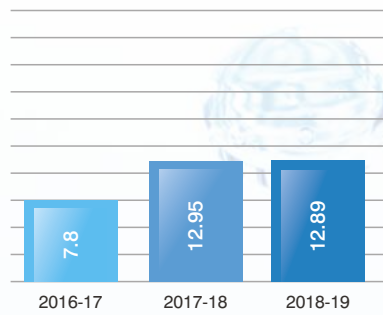
Total Wastewater Generated in ML



Gaganpahad

Destination of discharge	Units	2016-17	2017-18	2018-19
Total Wastewater Generated	ML	7.8	12.95	12.89
Total treated water discharged- Gardening	ML	7.8	12.95	12.89
Percentage of water recycled and reused	%	100.0	100.0	100.0

Total Wastewater Generated in ML



Energy Consumption

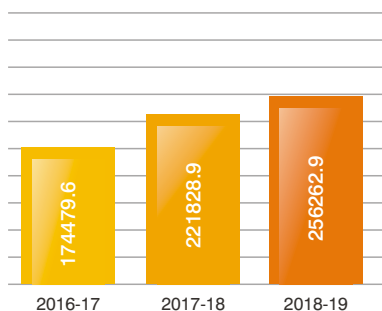
Our primary sources of energy are grid electricity, furnace oil, diesel and coal. The consumption of energy is majorly in manufacturing process, air-conditioning, lighting office buildings and equipment. All the fuels have been converted to GJ using generic conversion factors. We have also implemented an energy management system based on ISO 50001 at Shameerpet Vaccine Division. This provides a framework of requirements to measure and use data for better understanding of energy use, set objectives for energy use reduction and continually improve energy management. Our approach includes identifying opportunities in our business where we can reduce our energy consumption while also exploring and implementing new, more energy efficient technologies across our significant locations of operations.



Shameerpet Vaccine

Name of the Material	Unit	2016-17	2017-18	2018-19
HSD	GJ	7565.7	3206.4	3082.9
Electricity	GJ	74680.5	86235.8	98084.5
Furnace Oil	GJ	92233.4	132386.8	155095.6

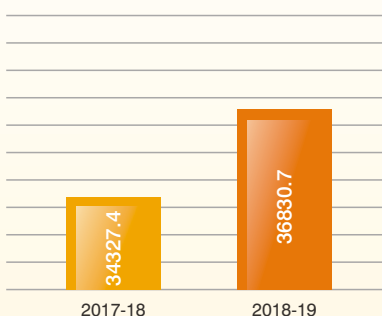
Total Energy Consumed in GJ



Shameerpet Pharma

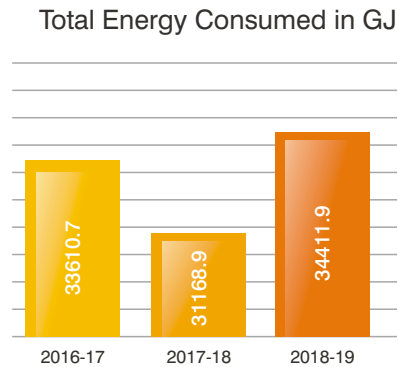
Name of the Material	Unit	2017-18	2018-19
HSD	GJ	1888.9	1460.7
Electricity	GJ	32438.5	35370

Total Energy Consumed in GJ



Gaganpahad

Name of the Material	Units	2016-17	2017-18	2018-19
HSD	GJ	1801.2	2064.2	1641.9
Electricity	GJ	9691.8	10135.9	10969.5
Coal	GJ	20209.4	18048.8	20873.9
Furnace Oil	GJ	1908.3	920.0	926.6



During the reporting period we implemented various initiatives to cut down on our energy consumption and greenhouse gas emission. We are reducing the electricity consumption and diesel consumption by proactively enhancing systems through redesign, retrofitting, operational upgrades, and by adding more advanced sensors and controls. We reduced 3041 GJ of electricity consumption. With the implementation of 31 energy efficiency projects during 2016-18 we saved 35 Lakh units of energy. Our specific energy came down to 33.4 MWH/Mds in 2018-19 from 35.5 MWH/Mds in 2016-17.

Replacement of Thermostatic expansion valve with electronic expansion valve

The thermostatic expansion valve for chiller consumed a lot of power about 334 Kwh per hour. Since the installation of electronic expansion valve the power consumption has decreased to 304 Kwh. This modification contributed to power saving of 30Kwh per hour and approx. 9 lakhs INR savings per year.

Installation of Human Sensors at Air curtains

At our Shameerpet facility we have installed human sensors at 9 air curtains out of 36, which led in 60% reduction of electricity, we are in the process to install the human sensors at all of the remaining air curtains.

Air Emissions

Global Greenhouse Gas (GHG) emission trajectory is expected to increase the frequency and intensity of extreme weather events. Along with increasing temperatures, these factors will bring about a range of health risks and impacts. In alignment with our purpose of advancing the world of health, we are taking action to reduce GHG emissions across our value chain. We are responsible to reduce our greenhouse gas emissions and contribute to global and national targets, hence we have identified air emissions as one of our key material issues. As a demonstration of our commitment to climate change, we are focusing on measuring, reducing and reporting the greenhouse gas emissions associated with our business operations. In the coming years, we intend to incorporate use of renewable energy and deploy energy efficient technologies within our operations. Through energy optimization in our production we plan to lower the emissions in our operations.

Direct emissions are generated onsite, from burning of fuels, or from processes at our operations. Indirect emissions are from the offsite generation of purchased electricity. We have used IPCC 2006 guidelines and user guide (version 1.0) of Central Electricity Authority (Ministry of Power) for calculation of greenhouse gas emissions. The base year for comparing the emission trend for Shameerpet-Vaccine and Gaganpahad is 2016-17 whereas for Shameerpet-Pharma it shall be 2017-18.

Shameerpet Vaccine

Emissions	Units	2016-17	2017-18	2018-19
Scope 1	tCO2 eq.	314218.7	10980.90	12871
Scope 2	tCO2 eq.	19292.5	19642.60	22341.46

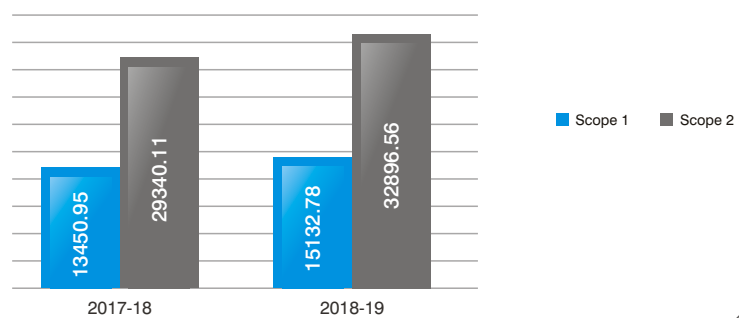
Shameerpet Pharma

Emissions	Units	2017-18	2018-19
Scope 1	tCO2 eq.	441.55	392.08
Scope 2	tCO2 eq.	7388.77	8056.50

Gaganpahad

Emissions	Units	2016-17	2017-18	2018-19
Scope 1	tCO2 eq.	14074.00	2028.50	1869.70
Scope 2	tCO2 eq.	2503.72	2308.74	2498.60

Total Emissions in tCO2eq.



The stack emission parameters namely SOx, NOx, and SPM; are monitored by government accredited external agency. The monitored values were well within the prescribed limits of the national and state level pollution control board.

Shameerpet Vaccine

Emissions	Units	2016-17	2017-18	2018-19
Total SPM	MT	125.99	673.83	144.74
Total NOX	MT	282.51	1481.04	342.52
Total SOX	MT	303.20	1717.13	269.37

Shameerpet Pharma

Emissions	Units	2017-18	2018-19
Total SPM	MT	660.02	489.27
Total NOX	MT	1703.31	1547.99
Total SOX	MT	1712.63	1535.28

Gaganpahad

Emissions	Units	2016-17	2017-18	2018-19
Total SPM	MT	29.02	17.50	17.24
Total NOX	MT	54.30	30.65	28.42
Total SOX	MT	55.94	29.60	29.38

We have used ODS (Ozone depleting substances) as a part of routine maintenance activity of air-conditioning systems

Shameerpet Vaccine

Name of the Material	Units	2017-18	2018-19
R 22	kg	45	15
R 404A	kg	44	90
R 410 A	kg	2	0
R 134A	kg	116	124

Shameerpet Pharma

Name of the Material	Units	2017-18	2018-19
R 407C	kg	170	160

Gaganpahad

Name of the Material	Units	2017-18	2018-19
R 22	kg	244	60
R 404A	kg	40	40



BE has been awarded the first prize in "Best implementation of ISO 50001/EnMS during the 3rd CII National Energy Efficiency circle competition held in Delhi. The award jury recognized our implementation of Energy Management System in the Shameerpet Vaccine manufacturing facility, as best in the industry. We are also the first vaccine company to implement EnMS.

**Best implementation
of ISO 50001/EnMS**

Waste Management

We strive continuously either to eliminate waste or to move it to a higher level in the waste hierarchy. This means that if waste cannot be eliminated, we work to divert it from landfill toward reuse, composting or recycling, incinerating to recover energy or incinerating for more efficient waste disposal.

We are particularly focused on reducing the amount of waste that we send to landfill. Our waste management efforts extend beyond our own operations. We have strict requirements for all vendors responsible for managing our waste. Waste management firms are evaluated which includes documentation reviews. These ensure that only appropriately qualified and responsible vendors are permitted to manage our waste. Currently we do not recycle or reuse waste in-house but we are in the process of developing action plans around waste management.

Shameerpet Vaccine

Hazardous Waste	Disposal Method	Units	2016-17	2017-18	2018-19
Used / Spent oil	Disposal to TSPCB Authorised Vendor	KL	2.2	0	1.441
Wastes / Residues containing Oil - Oil Soaked Cotton Waste	Disposal to TSPCB Authorised Vendor	MT	0	0	0
Discarded containers / barrels / Liners contaminated with hazardous wastes / chemicals	Disposal to TSPCB Authorised Vendor	Nos.	7132	0	7403
Chemical sludge from waste water treatment (ETP Sludge)	Disposal to TSPCB Authorised Vendor	MT	2.46	13.65	9.16
Used Batteries	Returned to the supplier (Buy Back)	Nos.	344	0	139
E-Waste	Disposed to the PCB Authorized Recycler	MT	6.04	6.66	4.187
Biomedical Waste	Disposal to TSPCB Authorised Vendor	MT	269.453	225.221	292.55
Glass Bottles	Disposal to TSPCB Authorised Vendor	Nos.	0	0	4441

Non-Hazardous Waste	Disposal Method	Units	2016-17	2017-18	2018-19
Packaging waste (Wood)	Reused in House	MT	26.775	32.81	54.56
Corrugated Box	Disposed through local scrap dealers	MT	123.47	113.01	158.105
Cardboards		Nos.	516	173	270
Paper & Stationery / Shredding Paper (Craft)		MT	2.325	5.615	9.97
Metal Scrap (MS, GI, SS & Aluminium)		MT	92.8215	97.801	30.8467
Plastic Waste		Disposal to TSPCB Authorised Vendor	MT	16.681	24.312
HDPE Containers	Reused in House	Nos.	7859	7547	0
Empty Corncob Bags	Disposed through local scrap dealers	Nos.	0	0	3383
Waste Rubber Stoppers		MT	0	0	0.286

Shameerpet Pharma

Hazardous Waste	Disposal Method	Units	2017-18	2018-19
Used / Spent oil	Disposal to TSPCB Authorised Vendor	KL	0.67	0
Wastes / Residues containing Oil - Oil Soaked Cotton Waste	Disposal to TSPCB Authorised Vendor	MT	0	0.3
Discarded containers / barrels / Liners contaminated with hazardous wastes / chemicals	Disposal to TSPCB Authorised Vendor	Nos.	0	0
Chemical sludge from waste water treatment (ETP Sludge)	Disposal to TSPCB Authorised Vendor	MT	0	1.86
Used Batteries	Returned to the supplier	Nos.	0	0
E-Waste	Disposed to the PCB Authorized Recycler	MT	0	1.04
Biomedical Waste	Disposal to TSPCB Authorised Vendor	MT	21.039	15.03

Non-Hazardous Waste	Disposal Method	Units	2017-18	2018-19
Packaging waste (Wood)	Reused in House	MT	9.7	3.35
Corrugated Box	Disposed through local scrap dealers	MT	0	13.705
Cardboards		MT	10	0
Paper & Stationery / Shredding Paper (Craft)		MT	0	28.8
Metal Scrap (MS,GI, SS & Aluminium)		MT	74.7	53.099
Plastic Waste		Disposal to TSPCB Authorised Vendor	MT	0.18
HDPE Containers	Reused in House	Nos.	480	2358

Gaganpahad

Hazardous Waste	Disposal Method	Units	2016-17	2017-18	2018-19
Used / Spent oil	Disposal to TSPCB Authorised Vendor	KL	0.6	0	0
Wastes / Residues containing Oil - Oil Soaked Cotton Waste	Disposal to TSPCB Authorised Vendor	MT	0	0	0
Discarded containers / barrels / Liners contaminated with hazardous wastes / chemicals	Disposal to TSPCB Authorised Vendor	Nos.	1000	0	0
Chemical sludge from waste water treatment (ETP Sludge)	Disposal to TSPCB Authorised Vendor	MT	1.695	0	3.685
Used Batteries	Returned to the supplier	Nos.	33	0	0
E-Waste	Disposed to the PCB Authorized Recycler	MT	0	0	0
Biomedical Waste	Disposal to TSPCB Authorised Vendor	MT	27.382	0	27.213

Non-Hazardous Waste	Disposal Method	Units	2016-17	2017-18	2018-19
Packaging waste (Wood)	Reused in House	MT	0	2.21	0
Corrugated Box	Disposed through local scrap dealers	MT	2.855	3.08	2.13
Cardboards		Nos.	78	0	0
Paper & Stationery / Shredding Paper (Craft)		MT	0	0	0
Metal Scrap (MS, GI, SS & Aluminium)		MT	11.951	20.5	3.075
Plastic Waste	Disposal to TSPCB Authorised Vendor	MT	311	0	0.265
HDPE Containers	Reused in House	Nos.	882	881	449
Empty Corncob Bags	Recycle	Nos.	0	0	408
Waste Rubber Stoppers	Recycle	Nos.	0	0	33

Environmental Compliance

We continue to prioritize compliance with national and global environmental regulations in our business operations and activities. Our legal team ensures compliance with the environmental and social policies, standards and government regulations. We continue to prioritize stakeholders' complaint and feedback on environmental issues whenever they occur, and resolve same promptly and to the satisfaction of affected parties. However, no environmental compliance failure was recorded in the year under review. Consequently, no fines were incurred during the review period.

Biodiversity

We are committed to preserve the biodiversity of the area we operate in and have integrated conservation of biodiversity to our environmental management systems. Our manufacturing facilities have green areas measuring more than 30% of our site. In all our facilities, we have taken number of steps to preserve the ecological value of the area. In Shameerpet facility, we have developed herbal garden, this functions as ideal nesting spot for a variety of birds and home to butterflies. None of our manufacturing units fall within 10km radius of any biodiversity sensitive areas. We often conduct plantation programs which increases our green belt eventually sequestering our carbon emissions.



15 acres of green belt developed at Shameerpet



2 acres of green belt developed at Gaganpahad



Haritha Haram Program at Biological E. Limited

Haritha Haram is a flagship program of the Government which envisages to increase the present 24 % tree cover in the State to 33% of the total geographical area of the State. As part of Haritha Haram Program, Biological E. Limited in co-ordination with the Factories department has taken the initiative and planted more than 500 saplings at Shameerpet and Gaganpahad of Silver Oak, Bauhinia Blakeana and Millingtonia. Biological E Limited has been participating in Haritha Haram program since 2016.

Environmental Expenditure

In FY 2017-18 and 2018-19 our overall environmental expenditure was INR 20.5 million and INR 21.6 million respectively which included expenditure of treatment, disposal, equipment, maintenance and implementation of energy saving initiatives.

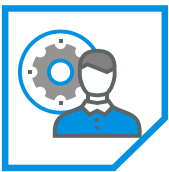
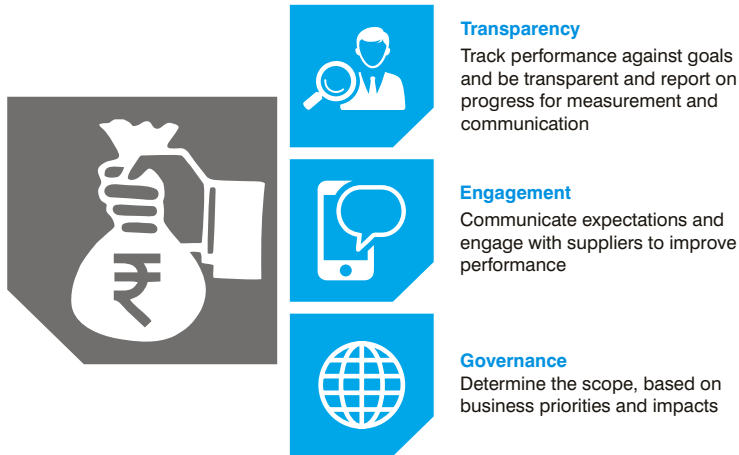




Responsible Sourcing



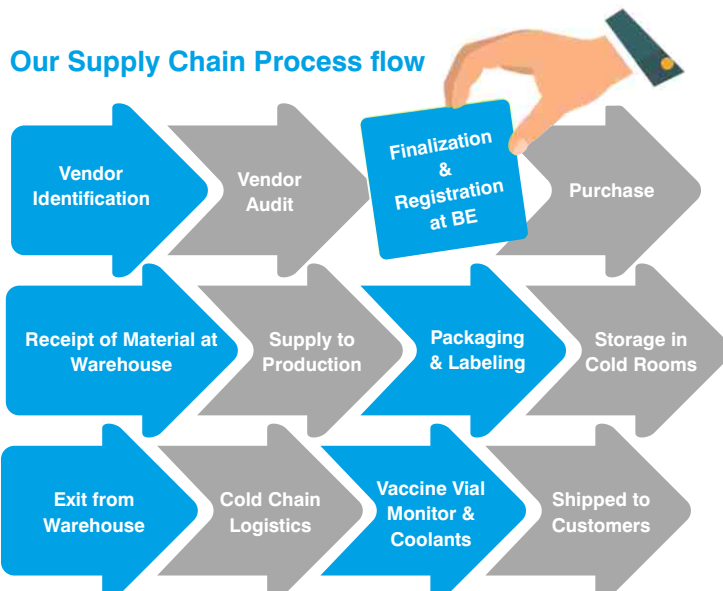
Our Suppliers are integral part of our business. We strive to build a strong foundation of mutual trust and understanding amongst our suppliers through regular connect. We work with our suppliers relentlessly to create value in our supply chain. In continuation to our effort of building a Sustainable Procurement framework, we collaborate with suppliers who have the same set of business ethics. Further, to fulfil our non-financial commitments, we have set an evaluation criterion for all our suppliers to comply with the laws pertaining to Environment and Social requirements such as energy conservation, occupational safety, human rights and labor laws etc. With best of suppliers, we produce best quality vaccines and pharmaceutical products which contribute in improving the health and survival of people across the world.



Significance of Supply Chain

We understand the importance of Supply chain in our business. Every product of ours that gets delivered to our end customers, results from the efforts of various entities that make up our value chain. Our connected network includes our employees, suppliers, vendors, contractors, distributors and logistics involved in the manufacture and sale of our products. We oversee each touch point from the initial stage of raw material procurement to the delivery of our products to end customer. We believe that each entity of our supply chain has a value to add in our products. As, we always collaborate with our suppliers and help them further in the areas of improvement.

We apply our principles of Governance, Transparency and Engagement for successful and responsible management of our supply chain. This helps build a robust supply chain management framework to evaluate our suppliers and ensure their compliance with all the applicable legal and statutory requirements. We procure materials such as chemicals, laboratory equipment, packaging material, consumables and office utilities.





Supplier Selection

Supplier selection is the most important step in supply chain management and also serves as the foundation for our business success. Hence, we always ensure that we have best available resources to deliver quality products through responsible suppliers. In alignment to our sustainability procurement framework, a standard operating procedure (SOP) is developed to select, evaluate and approve vendors. The SOP is developed for all the activities, ranging from vendor selection to vendor finalization. This is different for manufacturers and suppliers. In case of manufacturers, a separate manufacturer assessment checklist is provided to the vendors. This checklist includes aspects of Good Manufacturing Practices (GMP) and quality systems, to be complied by the vendors. This is followed by vendor self-evaluation. The filled-in self-evaluation form is evaluated by the quality department. Further to this, specification of required raw material is provided to the vendors. The vendors are then required to provide a set of three samples from their lots to the Quality Assurance department for evaluation. The vendor selection and approval procedures are also documented by Quality Assurance function. Based on this, the vendors are finalized and approved. Only the approved vendors are shortlisted for us to build a business partnership. The suppliers are further classified as Critical, Major and minor, depending on the type of

Type of Vendors	FY 2017 – 18	FY 2018– 19
Critical Vendors	13	21
Major Vendors	10	14
Minor Vendors	09	00
Total	32	35



Quality Control

Identify the requirement with specification for the material/services to be procured and identify the service provider where applicable



Packaging

To identify the requirements of packaging materials based on the products to be shipped



User-Any other non technical function

To identify the requirements on new material / services to be procured



Purchase

To identify suitable vendor meeting the requirements and specifications as identified internally. In case of raw materials, arrange for pre shipment samples



Quality Assurance

To prepare, update and control the Approved Vendor List in coordination with the Purchase team and prepare vendor qualification report

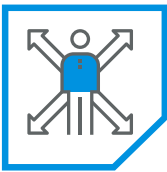


Supplier Diversity and Localization

We believe collaboration leads to success and creates healthier environments. Hence, we invest in diverse geographies and produce

products that create healthier impact in India and abroad. Even though we have major suppliers from USA, Germany, Japan, Switzerland, Denmark and France, about 91% of our materials are procured locally from India. We consider creation of local business opportunities as an important step in creating positive impact on the local communities where we operate. Hence, we partner with small businesses and support them in their business growth thereby making a way for employment opportunities.

In 2017-18, we had engaged with 679 new suppliers with a total service value of INR 294.78 Cr, while in the fiscal year 2018-19 we engaged 201 new vendors for vaccine business and total service value was for about INR 414.9 Cr.



Building Ethical Supply Chain

We engage with our business partners including suppliers, vendors, contractors and logistic partners to keep a check on our supply chain operations progress. We continuously

monitor our supply chain risks and align our operations with strategic initiatives to continuously improve our supply chain management. We conduct yearly risk assessment of our supply chain to enhance our operational capabilities. With our products reaching far and wide, it is essential for us to ensure that our materials are sourced ethically. Hence, we maintain a robust, structured process and document all the necessary observations for further improvements.

To ensure ethical supply chain, we ensure that our vendors follow the Good Manufacturing Practices (GMP) and our Principles for Responsible Supply Chain Management. We also ensure that our vendors are certified and comply with all the applicable national and international standards and regulations. Since the beginning of business relations with the selected vendors, we set our expectations with our suppliers on environmental and social ethical practices. This includes fair labor practices including human rights, health and safety and environment protection.

Our quality assurance department along with the procurement department conduct regular assessments for the new and existing vendors based on the supplier categories. We do not conduct site audits at our minor vendors. But, we assess all our critical and major vendors after completion of one year of engagement through site audits. We assess them on quality of their deliverables, timely delivery, processes and procedures at their facility, compliance status pertaining to all the applicable statutory requirements and ethical standards. During the reporting period, 19 critical and major vendors underwent site audits.

We strictly adhere to all the applicable regulations and standards and expect the same from our vendors. We also place high importance on quality of our products. Hence, we are zero tolerant with any non-compliances or quality issues in our supply chain. In case of any vendor doesn't conform to the applicable laws of land and also holds no surety for its conformance in the near future, then the relationship with the vendor stands jeopardized. Following are the reasons, why a vendor could be rejected from future collaboration, Firstly, rejection of five consecutive shipments in a year, non-suitability for requalification and 'poor' rating during annual performance reviews. In case of vendor rejection, the material or the service provided by the respective vendor is thoroughly investigated. Further, the Quality Assurance function head decides whether the existing material could be utilized for the manufacturing operations based on a valid justification. In the reporting year, there were no vendor rejections.

In this scenario of regular assessments, we check our suppliers for any challenges in their processes or risks and provide technical support to resolve the issues. We also provide them continuous mentoring on setting up robust internal processes and mitigation of identified business risks.



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Workforce Management

Sports Fest

Town Hall Meetings

BELIV Triya

Road Safety

Occupational Health and Safety
Sports Fest
Training and Development
Triya Program
Learning Management System
Knowledge Management
Employee Grievance Mechanism
Product Responsibility
Customer Excellence
Transparency in Communication
Occupational Health and Safety Fest

Diversity and Equal Opportunity
Human Rights
Employee Benefit Program
Access to Medicines
Attracting and Retaining Talent
Blood Donation Camps
Road Safety
KAIZEN
Employee Performance
Freedom of Association and Collective Bargaining

Social Footprint

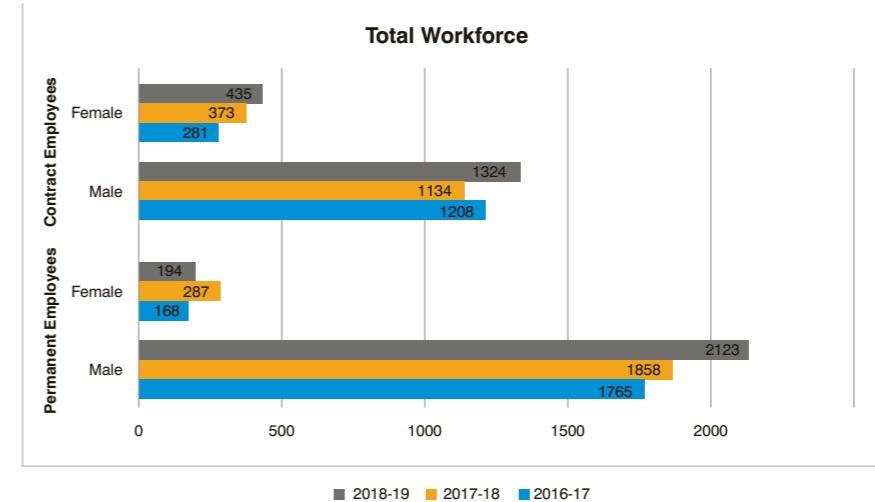
Our people are our assets and are integral to our business. We firmly believe in respecting the individual and collaboration at work as the key ingredients for the long-term business success. We give utmost importance to growth of our people and give them equal opportunities without any discrimination to enhance their skills through various training programs round the year. We also encourage them towards healthier lifestyle through various workshops and seminars. For us, safety is priority and we ensure that our safety culture is imbibed in all our people hence, creating a safe and healthy working atmosphere.

Workforce Management

The emergence of advanced healthcare systems and pharmaceuticals have enhanced the growth of pharmaceutical industry tremendously over the years. It also puts the industry in a spotlight to improve their product portfolios and invest in research and development and innovations to cater the ever growing and changing needs. The healthcare sector has also got its boost from the various national and international initiatives towards healthcare, which in turn has created unlimited job opportunities in the sector. We consider it crucial to have a workforce which is efficient, technically sound and advanced expertise in the field of healthcare. Hence, we handpick best of talent in our business to drive and achieve our set targets and goals. Our total workforce increased by 12.5% since 2016-17.

Description	Units	Permanent Employees		Contract Employees		Total Employees in 2017-18
		Male	Female	Male	Female	
Corporate Office	Nos.	58	16	21	4	99
Head Office	Nos.	94	19	7	2	122
Pharma Division	Nos.	668	78	513	114	1373
Vaccine Division	Nos.	1038	174	593	253	2058
Total Workforce	Nos.	1858	287	1134	373	3652

Description	Units	Permanent Employees		Contract Employees		Total Employees in 2018-19
		Male	Female	Male	Female	
Corporate Office	Nos.	85	20	0	0	105
Head Office	Nos.	57	10	0	0	67
Pharma Division	Nos.	745	83	478	126	1432
Vaccine Division	Nos.	1236	81	846	309	2472
Total Workforce	Nos.	2123	194	1324	435	4076



Diversity and Equal Opportunity

We operate in India but have our footprint across globe. We are an equal employment opportunity provider and expect the same from our business partners. We do not discriminate talent based on gender, race, religion and geographies. We give equal opportunities for our talent to invest themselves in trainings and development. We abide by all the applicable regulations and standards to guard our social performance. We do not discriminate pay based on gender. The compensation to both our permanent and contract employees is above the minimum wage rules stipulated by the State government.

Attracting and Retaining Talent

Over the years, we have grown as one of the most preferred pharmaceutical giants in terms of product portfolio and employment. The same is said and regarded by the scientific communities in the US and Europe. Our HR department proactively manages our workforce and also brings in pool of talent every year to integrate young and talent individuals to perform and grow with the organization. We engage our people in various trainings and development workshops to keep up at pace with the advances in the pharmaceutical industry. We also nurture them to bring an instrumental change in our products through advanced collaborative research and development. We are a performance driven company and expect our employees to stay ahead in their growth curve by building strong working relationships with their peers.





Biological E. Limited Sports Fest 2019

Biological E. Limited Sports fest 2019 started on first week of March and it is on the verge of completion. It was held in Shameerpet Vaccine Plant across different Business units. Different games both indoor and outdoor were played. We had Cricket, Chess, Table tennis, Caroms, Volleyball, Badminton, Throw ball etc. Most of the events were held in the presence of umpires/referees. All sports coordinators synchronized very efficiently and conducted their respective events to their best.

The opening of the event witnessed spirited Tug of War, followed by Volleyball, Table Tennis and other games in following days. In total BE registered participation of its 1096 employees divided in 261 teams for varied games. Now the most awaited event is Cricket Finals 2019, which will be held on 04.04.19 at Yadaram Cricket Ground.

Town Hall Meeting with the Managing Director and Leadership Team



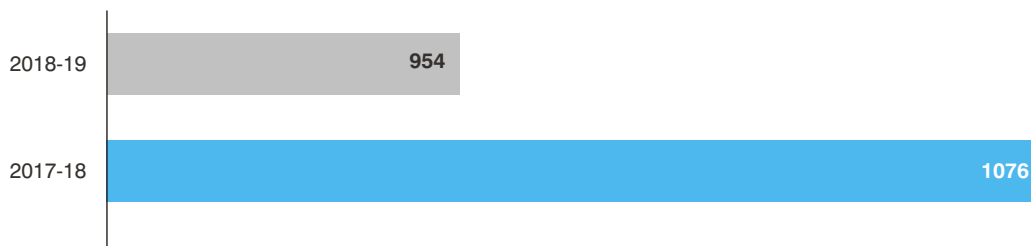
Town Hall Meetings are events where the leadership team led by the MD takes the opportunity to provide updates about the Company's Strategy, Long-term Business Plans, while emphasizing the Goals & Objectives and the Ethics & Values in conducting our business. The Town Hall meeting is also a great opportunity for the MD & Leadership to seek feedback, answer questions directly from any employee on a relevant topic pertaining to the business or operations or future plans.

In 2018-19, the percentage of new joiners increased by 151% as compared to 2016-17. In 2018-19, the percentage of new joiners increased by 41% as compared to 2017-18.

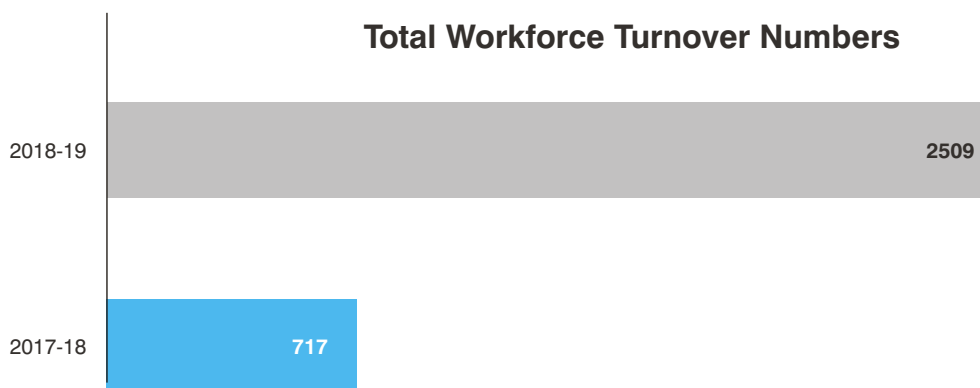
Total New Hires								
Employee Category	Units	<30 years	30-50 years	>50 years	Male	Female	2017-18	2018-19
Permanent Employees (On Payroll - Staff)	Nos.	251	145	3	367	32	399	293
Contract Employees (Out-sourced)	Nos.	554	120	3	605	72	677	661
Total New Joiners	Nos.	805	265	6	972	104	1076	954

Workforce Turnover (include cases of retirement, transfer and death)								
Employee Category	Units	<30 years	30-50 years	>50 years	Male	Female	2017-18	2018-19
Permanent Employees (On Payroll - Staff)	Nos.	128	103	2	216	17	233	1373
Contract Employees (Out-sourced)	Nos.	426	57	1	438	46	484	1136
Total Workforce Turnover	Nos.	554	160	3	654	63	717	2509

Total New Hires (in Numbers)



Total Workforce Turnover Numbers



Construction Safety Film Launched

We launched an animation film on 'Construction Safety'. This film has been designed to impart training in Construction Safety to the newly joined construction associates. This video includes key safety aspects/procedures such as Work Permit System, Safety Rules, and Precautions, Handling PPE, and Firefighting which are necessary for ensuring safe working practices at the site. Going forward, we plan to use this video as part of the Safety Induction for all the associates across our construction sites.

Triya Launched

Triya, BE Women Network, was launched in our Vaccine Plant at Shameerpet on November 1, 2017. Triya is designed to work on the three pillars - Inspire, Ignite and Involve. It aims to engage and empower the women employees in an incredible way at BE. This network is built, nurtured and run by our women employees. This league of extraordinary women employees inspires the women workforce to face new opportunities and challenges with a great confidence through building a culture of creativity and innovation in the organization. This forum aspires to create a dialogue, debate and forward thinking in addressing the gender barriers of female employees across the organization. It is a platform established on values such as teamwork, respect for the individual, strength and diversity.

Employee Benefits

We ensure that our employees are always satisfied with the work they do and enjoy the benefits of their hard work. Apart from the mandatory benefits paid leaves and ESI, we offer commutation facilities, regular health check-ups, and a full-time occupational health clinic at our premises. These facilities are made available for both the permanent and contractual staff. Whereas, the permanent employees are also eligible for employee provident fund, pension schemes, gratuity, medical reimbursement and leave encashment.

Parameters 2017-18	Female employees	Male employees
Number of employees that were entitled to parental leave	57	717
Number of employees who took parental leave in 2017-18	6	111
Number of employees who returned in 2017-18 after their parental leave ended	6	111
Number of employees who took parental leave in 2016-17	2	80
Total number of employees retained 12 months after returning to work following a period of parental leave	2	63
Return to work rate (%)	79	

Parameters 2017-18	Female employees	Male employees
Number of employees that were entitled to parental leave	88	1285
Number of employees who took parental leave in 2018-19	4	103
Number of employees who returned in 2018-19 after their parental leave ended	4	103
Number of employees who took parental leave in 2017-18	6	111
Total number of employees retained 12 months after returning to work following a period of parental leave	4	99
Return to work rate (%)	88	

Occupational Health and Safety

Given the nature of our operations, safety and health has always been our top priority. We have established and implemented a world-class integrated health and safety management system aligned to the international standards OHSAS 18001, and now are in process of transitioning to ISO 45001. Through this, we carry out safety inspection and management activities at all our operational sites. Our health and safety management system guidelines apply to all the employees working at BE, this includes employees on our payrolls as well as those deployed on contract basis. Our occupational health and safety policy outlines our processes to mitigate the risks and our goals towards healthier and safer work environment. The policy is communicated to all the employees during the induction program. All the activities carried out as part of our operations are covered in the health and safety management system, this also helps us in conducting effective and periodic risk identification and mitigation.

Our employees are backbone of our business operations and the reason for our continued success, we value each and every employee of ours and ensure that they work in highly safe and motivating environment. Safety is one of our core values and we ensure that our health and safety practices are on continuous improvements throughout the year. Our safety performance and compliances are monitored, measured and analyzed using internally developed dashboards. All our employees are trained and are required to identify, alleviate and control risks specific to their operation. We aim to introduce a new Emergency Management Framework that will ensure consistency across safety concepts and strategies adopted at sites and functions through its approach to preparation, response and escalation. The framework will also provide guidance on preventing or mitigating significant negative occupational health and safety impacts that are directly linked to our operations.



A safety committee is set up to review and improve the health and safety performance of our organization. It includes equal representation from senior management and workers. The safety committees are set up at each organization/location. After, the initial review by the safety committee, the reports are then submitted to the Central Safety, Health and Environment Committee [SHE] for further review and feedback. The central SHE committee plays a vital role in identifying the risks associated with health and safety and ensures that relevant processes and procedures are in place to mitigate the risks. The committee oversees all the activities associated with health safety and contributes in improving the safety statistics of the company. We have also provided additional health services for the wellbeing of our employees that includes - conducting health check-up & blood donation camps, pre-employment medical check-up and tie-ups with local hospitals. During the reporting period there were no recordable injuries or fatalities.

Road Safety

Biological E. Limited in co-ordination with Safe Drive India Pvt limited has conducted Defensive Driving Training at Shameerpet on 29th, August, 2017 and completed Bus Inspection and Driving Test for all BE buses drivers. The objective of the training was to bring in awareness on the road safety amongst all BE drivers. This training session was organized for all the company bus drivers, the company leased car drivers and employees' personal vehicle drivers. Around 31 drivers participated in this training.

Blood Donation Camps

Our Shameerpet and Gaganpahad facility organized a Blood Donation Camp in association with Red Cross Blood Bank. The main objective of this Blood donation camp was to save the children who are suffering from Thalassemia and Cancer. We collectively donated total 124 units of Blood to Red Cross Blood Bank.

BE Participates in CII's 32nd KAIZEN Competition

BE is one of the first vaccine and pharmaceutical companies to participate in the 32nd KAIZEN (IDEA) competition of Confederation of Indian Industry (CII). Our Breakthrough IDEA was selected in top 8 IDEAs. The CII appreciated BE for taking this initiative and participating in the competition, which was held from April 19, 2018 to April 20, 2018 at Pune. Earlier, BE's Vaccines Division invited the improvement IDEAs (Kaizens) from all departments from Shameerpet and Gaganpahad facilities. BE sent five IDEAs to the CII. Three IDEAs were shortlisted for the competition. Out of the three IDEAs, Breakthrough IDEA (In-House Siliconization of Vials) was selected in the Top eight IDEAs.

Taking a step further, our health and safety department organizes various trainings and healthy programs to inculcate safety practices and healthy lifestyle in our employees. We also publish annual SHE newsletter which highlights our safety performance, safety committee meetings, outcomes and various initiatives undertaken round the year to improve the health and safety of our workforce.

In the reporting period, there have been no reportable accidents. We monitor near miss incidents as well as the first aid cases apart from reportable accidents. In the reporting period, we recorded 8 first-aid cases and 161 near miss cases. We have not received any occupational disease cases in the reporting period.

Training and Development

We hire the right type of talent and nurture them through extensive induction training followed by on the job and professional trainings. We expect our employees to be up to date with the latest advancements and help them hone their skills knowledge and skills, which are critical for success of our products. We have an Operational Excellence team which extensively trains the workforce to achieve better results. We encourage them and help them shape their career with company's success. Our HR department carries out competence mapping and develops a list of all the necessary trainings for the workforce depending upon their nature of work. Regular trainings are scheduled thereafter, which includes both functional and behavioral trainings. The outcomes of these trainings are discussed with our employees for further improvements. The major focus areas for trainings include, occupational health and safety, skill enhancement and good manufacturing practices (GMP). We have introduced systems in place to record gender-wise participation in the training programs for both permanent and contract employees.

One such initiative is 'IDEA- Identify, Develop, Empower and Achieve' generation campaign. It is an operational excellence initiative under which all the employees including contract staff and workmen understand the work activities of their peers and suggest improvements (kaizens). During the reporting period, the average training hours per employee was 5.3hrs. Our major training areas are occupational health and safety, skill enhancement and CGMP. While we capture the number of trainings conducted in the organization, we are in the process of implementing systems to capture gender wise participation in these trainings.

GMP Training Man-hours	Year	Total
Training Man hours - Permanent Employees	2017	5586.2
Training Man hours - Contract Employees	2017	6000
Training Man hours - Permanent Employees	2018	8927.5
Training Man hours - Contract Employees	2018	2736

S. No.	Description	Unit	2017-18	2018-19
Permanent Employees				
1	Number of trainings attended	Nos	2049	65528
2	Training Hours	Hours	7723	21569
Contract Employees				
3	Number of trainings attended	Nos	259	1122
4	Training Hours	Hours	202.5	374

BE Leaders Involved (BELIV) program

BE Leaders Involved (BELIV), a unique program initiated by the HRD, was organized at Vaccine Plant, Shameerpet, on December 20, 2017. This program brings the new employees and the leadership team together and create an opportunity to have a lively interaction. The program begins with an ice-breaking session and introduction of the new employees. Later, the leadership team members explains about the organization, its journey, policies, procedures and achievements. Finally, the new employees share their experiences at BE.

Learning Management System (LMS) Goes Live

The Learning Management System (LMS) went live on May 25, 2017. The LMS application was designed and developed by our in-house IT modernization team. This application is used for managing technical training of the employees at the Vaccine Division. LMS training lab has been set up in the CQA Office with five computers. This central facility will be used for Initial cGMP trainings and also for all departments for completing their on-the job training.

All employees have LMS accounts and would be able to view their training subscriptions and completion statuses at all the time. It will be possible for them to take up self-trainings right at their desks, saving time and resources. Trainees will receive notifications on their scheduled, pending and overdue trainings to which they can quickly respond. Supervisors can view the training status of their team and can intervene whenever required. With the help of LMS the experience of training and capacity development will be enhanced greatly.

Knowledge Management (KM) at BE

At BE we believe Knowledge Management is simply **“Providing the Right Knowledge to the Right People at the Right Time to enable the Right Decision Making”**. With a vision to be one of the top vaccine's players by 2025, Knowledge Management is one of the important initiative to achieve the set goal. We understand that our employees are a critical success factor in excellent service delivery to customers. Consequently, we make significant investment in the development and training of our employees because our success depends on the expertise, competence, and commitment they possess. We realize that for us to retain highly trained, skilled, competent and motivated employees, we have to offer them opportunities to improve their skills and maximize their potential. This approach helped us in introducing KM practice at BE couple of years back with a vision to make BE a knowledge enabled enterprise.

Knowledge Management (KM) portal has been developed using SharePoint platform that can be used to collect, share, learn and leverage required information and get updated with the latest trends around healthcare sector globally. The KM system offers various features for employees to share and leverage knowledge at any point of time. The key features of the portal are, but not limited to wiki, blogs, search engine, sector specific reports, whitepapers, research articles on vaccines, webinars and workshop materials and videos.

With Knowledge Management, we aim to achieve:

- Standard activities driven by knowledge and collaboration
- Timely knowledge transfer and its application at work
- Empowering employees with right knowledge
- Use of captured knowledge across functions

We aim to build a world class knowledge sharing culture where all the employees at BE share, learn, apply knowledge as part of their work culture.

Employee Performance

Our employees are encouraged to perform better by setting their annual goals and their performance at the end of the annual cycle is reviewed and appraised by their respective managers. Through this process, we review the overall performance of our employees and give them feedback on the areas of improvement. We also have mid-year review of all our employees except those who are on sabbatical, education leave or long leave. The performance assessment helps us promote and give salary hike for the deserving candidates. In the reporting period, 100% of our employees underwent performance appraisal process.

Human Rights

We are a 60+ year old pharmaceutical company, with a great reputation of business ethics. We comply with all the applicable labor laws, minimum wage rules etc. We do not encourage discrimination, child labor, compulsory or forced labor in any of our operations across our supply chain. We have clauses pertaining to labor and industrial laws in our contract agreements with all our partners. During the reporting period there have been no violations with respect to labor laws and human rights in our operations and supply chain. The aspects related to human rights are communicated during the induction trainings and it is also made available in the intranet portal.

Freedom of Association and Collective Bargaining

We have recognized employee union at our Gaganpahad facility and engage with them periodically to understand their work life, welfare, career development and other issues which may require our attention including grievances. We give all the rights to our workmen to follow freedom of association based on the service conditions in the MoU made through collective bargaining and codetermination. 11% of workers are covered by collective bargaining agreements. In case of any significant changes in the policies, procedures and practices, we inform our employee union with priority and they are given a minimum notice period of 2 weeks to update any major changes in the operations or facility set up.

Employee Grievance Mechanism

We ensure that all our employees are heard and hence have put a formal employee grievance redressal mechanism in place. All the grievances are collected in a database and is managed by our HR department. A

standardized procedure is developed to resolve the issues and concerns raised by the employees. We have senior members and key leaders are a part of this redressal system and they address the issues with and dealt with utmost diligence. We also maintain confidentiality so that people can express themselves without fearing the disclosure of their identity. We also maintain the statistics and nature of complains/concerns raised and the status of their resolution. This reporting year, we did not receive any grievances related to unfair labor practices.

Product Responsibility

We are in this industry for more than 60 years. We currently export our products to many countries across the globe, which includes APIs, Finished Formulations and Biologics. We are determined to increase our product portfolio in various countries year after year by brand promotion. With latest cGMP compliance and WHO prequalified vaccine facility, we have been able to expand our international presence in almost all countries globally. We are also a leading supplier of Vaccines for National Immunization Program of India and have supplied more than 300 Million Doses of Vaccines for routine Immunization to the Ministry of Health & Family Welfare. We also supply vaccines to several Hospitals and Medical Institutions.

All our vaccines are delivered under validated Cold Chain to ensure Vaccine Quality till the last point. It is our responsibility to implement utmost safety and stringent quality standards in our research and development operations. We understand that hygiene is the most important element in the health care sector and we strictly adhere to all the safety rules and stringent hygiene standards that we have set for ourselves. We conduct clinical trials in the premarketing stage to double check the safety aspects of our products. The trials are conducted in well controlled atmosphere and give us an understanding on their working on the consumers. These trails are crucial for the assessment of our product safety and impacts. We also conduct post-marketing pharmacovigilance to understand the impacts and risks associated with the product. We comply with all the applicable regulations on product safety, quality and labelling. So, far we have not received any complaints related to non-compliance or any adverse incidents related to product labelling, quality and their health and safety impacts, leading to fine or penalty or warning.

We have Research and development (R&D) facilities which are operated by various experts and key professionals who have outperformed and given us the success, which we have. Our products are tested for their life-cycle, keeping the health and safety of end customers as priority. We also ensure that our products do not harm the environment. Hence, we study the cradle to grave approach of all our products through thorough research. We develop and market only those products which create positive impacts. We hire only best people for our operations and hone their skills through continuous rigorous trainings to for them to perform better employees.

To assess our products of any risk, we have set up R&D committee and Quality control/Quality Assurance Committee. These committees work in collaboration and assess all our products and processes to identify any potential risks and provide risk mitigation measures. They continuously monitor the operations, risk procedures and implementation of the mitigation measures to ensure that the products produced are best in quality and are safe to our society and environment.

State-of-the-art Facility Inaugurated

A state-of-the-art facility for manufacturing Noscapine and Noscapine Hydrochloride drug substances was inaugurated at Block-II of our Pharmaceutical unit at Shameerpet on September 25, 2017. The Noscapine and Noscapine Hydrochloride manufactured in this facility shall be used for captive consumption and supplied to our esteemed customers and regulated markets such as Japan. It will also be supplied to our customers in Chile, Korea, Taiwan, Singapore etc. This facility is designed and built as per the USFDA and EU standards having provision for semiautomatic operation.

Dehradun Plant Receives WHO Certificate

BE's Dehradun Plant received the World Health Organization's (WHO) Good Manufacturing Practices (GMP) certificate in the month of May, 2017.

Over 400 Million Doses of HITT Produced Without Batch Fail

A cross-functional team of Production, QA, QC and Engineering together achieved a remarkable production of more than 400 Million Doses of HITT in about 512 consecutive batches without failure over a period.

Pharma COO Inaugurates ES Manufacturing Plant

Mr. Madhu B, COO, Pharma Division, inaugurated a state-of-the-art facility in April 2017, for the manufacturing of Enoxaparin Sodium (ES). The Module-I of this facility is designed exclusively for manufacturing of Enoxaparin Sodium drug substance. The Drug Control Administration, Government of Telangana, has approved this facility for manufacturing of Enoxaparin Sodium. The facility complies with the stringent CGMP guidelines of drug regulators such as USFDA, EMA etc. The finished products of this facility would be launched in the regulated markets such as the US and EU after receiving approvals. We believe this will open new business opportunities for us in a complex generics portfolio.

Customer Excellence

Built on a strong competition and quest for survival in the market, more and more companies have been attending their clients in a way that their needs and expectations are met satisfactorily. A widespread research across industries over the last few decades have shown that customers do more business with companies that deliver better experiences. Also, Companies that prioritize customer experience are more valuable than those who don't. Customers are focus point of our business. We believe, as a Company if we can effectively measure and manage customer experience then we are better positioned to outperform our competitors in terms of key triple bottom line measures including profitability.

BE supplies several essential and lifesaving Vaccines and Pharmaceuticals to UN Agencies viz. UNICEF, Pan American Health Organizations, other global markets. It is even more important for us to ensure that our products meet the customer expectations and are beneficial to end users. We ensure that our products are best in quality, safe and affordable. We always strive to give the best available products and health solutions to our end consume. We have partnered with various national and international organizations to carry out best research and development processes to cater to the growing healthcare needs. We have been extremely stringent with compliances and aim to give the best to our end consumers. To understand our customer's needs better, our marketing and sales team, frequently interacts with customers through one-on-one meetings, emails, telephonic calls, web chat and other social media platforms. This helps us understand their needs and concerns better. We conduct customer interviews annually to understand our product performance and areas of improvement. We also carry out customer survey in a periodic basis to collect their feedback and reflect upon our performance. We intend to develop more holistic, consistent, and actionable framework of customer satisfaction measurement to understand the multidimensional nature of our customer relationships, this will encourage us to Improve us perform and provide much more quality offerings to the society.

BE Participates in PEDICON 2018

We participated in the PEDICON 2018, which was organized by the Indian Academy of Paediatrics (IAP) from January 4, 2018 to January 7, 2018 in Nagpur. Around 500 doctors visited our stall, including Past IAP President Dr. Pramod Jog, and IAP President elect for 2018 Dr. Digant Shastri, and other Key Opinion Leaders (KOLs) at the PEDICON 2018. The PEDICON 2018 was also known as the 55th National Conference of Indian Academy of Paediatrics.

Transparency in Communication

In today's dynamic market, companies are facing more demand by regulators, investors and customers to be transparent about their performance and strategies towards environment, social and corporate governance. The market leaders can no longer be content and be satisfied with financial performances alone. We are a company of ethical practices. We hold responsibility of our actions to our stakeholders.

When we embarked on the journey of sustainability reporting and carried out stakeholder engagement, we realized how our stakeholders expected us to be transparent in whatever we do and communicate the same. The management of Biological E believes transparency in disclosure, through reports or information on our products is essential for the Company's business ecosystem it can help us gain legitimacy and reputational benefits and apprise the customer about our product specifications. In addition to this, we understand transparency can also be a pre-requisite for achieving

both environmental and social sustainability. Hence, we consider transparency in communications crucial to build trust amongst our stakeholders. We promote our products by following the applicable advertising codes. We include critical information of our products on its packaging and if need be in a separate leaflet along with the product. We also put up the necessary information about of business offerings, products on our website.

BE Scores Hat-Trick at ABCI

We scored a hat-trick by winning a couple of the Association of Business Communicators of India (ABCI) national awards for beep and an online communication campaign at the 57th annual awards ceremony held in Mumbai on December 22, 2017. Biological E Employee Portal (BEEP), our intranet, has been winning the ABCI awards successfully for the last three calendar years in a row.

Access to Medicines

According to WHO, nearly 2 billion people have no access to basic medicines, causing a cascade of preventable misery and suffering. A third of the world's population lacks access to essential medicines. In many low- and medium-income countries, drug therapies are unaffordable to those who need them.

Working towards achieving our vision, providing equitable access to quality vaccines & pharmaceutical products, the recent years have heralded a period of transformation for BE, both in terms of the pipeline of product offerings as well as our geographical footprint. Transitioning from being a generic vaccines manufacturer to a novel vaccine developer is indeed a momentous milestone for the company as it continues to evolve. We historically developed and manufactured generic vaccines for the emerging markets. To ensure optimal emphasis on the new initiative, the company plans to focus on developing novel vaccines to address unmet medical needs for the global markets.

We at BE strive to contribute significantly to increase the accessibility of medicines to the people who need them the most. We are putting additional efforts to further accelerate health care accessibility and affordable medicines in line with Goal 3 of UN's Sustainable Development Goals. BE has supplied more than 2 billion doses of multiple vaccines to children across the globe, and the company has emerged as a leading global supplier. In 2018, about 40 percent of revenues were derived from the international donor market. While lower prices are important to increase widespread immunization, one of the greatest risks BE faces is price erosion. Since 2018, a few suppliers left the market because they did not have the volumes to absorb the low prices. BE's large capacity allows it to deliver high volumes and this has helped the company to adapt, even as prices have continuously dropped. We are focused on technology as well as the right capacity solution at the lowest cost possible without compromising quality. We offer a vast portfolio which consists of Biologics,

Pharmaceuticals and Bulk Antigens, which caters to both domestic and international markets. The portfolio caters to both pediatrics and adults and caters to the healthcare initiatives undertaken by the GOI to help reinforce healthcare system in the low-income groups.

Giving Millions of Children a Healthy Start in Life

Pentavalent is one of the most commonly used vaccines in the world because it is effective and offers greater convenience. Fewer doses of these help the government to reduce the overall cost of vaccination, which includes the purchase price of the vaccines, cold chain logistics, as well as transportation and wages for health workers who administer the vaccines.



In September 2012, Ibrahim was the first child in Nigeria to be immunized by BioE's Pentavalent vaccine.

BE's Pentavalent vaccine earned the "WHO pre-qualification," which enabled it to supply to UNICEF, the world's largest purchaser of vaccines. Between 2012 and 2017, BE supplied more than 2 billion doses of different vaccines. Its low-cost vaccines are reaching children in over 80 countries across the world. Today, BE is a leading global supplier of the Liquid Pentavalent Vaccine (LPV) and produces more than one million vaccine doses a day making it the second largest vaccine manufacturer in India.

In June 2012, the government of Nigeria introduced the pentavalent vaccine into the routine immunization schedule in Africa. This was an important step for a country that accounted for half of the global childhood deaths. Nearly one-third of deaths of children under five years old can be prevented with vaccines. But for decades, millions of children across the world did not have access because of higher vaccination cost. These circumstances led the Bill and Melinda Gates Foundation (BMGF), to pioneer a partnership that included the Global Alliance for Vaccines and Immunization (GAVI), United Nations International Children's Emergency Fund (UNICEF), the World Health Organization (WHO), the World Bank, several development organizations and vaccine manufacturers. BE was just entering the international market but it was able to respond with large volume capacity. To get its vaccine to the international market, BE had to pass the World Health Organization's (WHO) rigorous inspections which certify that its vaccines meet global standards for quality, safety, and efficacy.





Economic Performance

Our investment in our business and stakeholder improvement aids in our achievement of generating increased revenues, and business expansion in various regional markets. We strive to continuously improve our partnerships to support our rapidly expanding product portfolio. Hence, we strive to efficiently manage our value chain, so it stays at pace with the changing industrial trends and continues to add value to our company's bottom line. As a leading, world-class Biologics and Pharmaceutical Company, we aim to continue creating healthier environments and support the well-being of people around the world. In the changing market trends, we intent to optimize our product portfolio and focus on selected essential and lifesaving pharmaceutical products.

Since many years, we have maintained a very strong professional relationship with Government of India and aspire to emerge as a synonym for best in quality pharmaceutical products and vaccines. To make this possible, we have our skilled manpower who are the basis of our quality products and business success. We are making efforts to hold on to our unparalleled contribution in the field of healthcare by investing in our research and development, infrastructure and technological innovations at our facilities. We have always been an epitome of quality in our preventive medicine sector and now in pursuance to emerge as a successful player in the Gene therapy sector.

The 'Make in India' mission and the growth of Indian pharmaceutical market also offers key opportunities to drive and expand diverse product portfolios that caters the need of the present and possible future. The vaccine industry has generated revenue of INR 57284.74 Lakhs in 2017-18 and 68362.09 Lakhs in 2018-19 with a contribution of 69.5 % and 73% respectively of BE's total revenue and the pharmaceutical product industry has generated about 30.5% and 27% revenues in 2017-18 and 2018-19 respectively. Through the ongoing business operations, we aim to make essential contributions towards the economic growth of the country. We seek more opportunities of engagement with national and international government and non-government organizations to develop breakthrough treatments to benefit the well-being of people. This is possible only when we start to cultivate better understanding of the changing and growing needs of the people. Along with this, we are also making efforts towards increased access to affordable medicines.

Particulars	Economic Performance in 2018-19 (in INR)	Economic Performance in 2017-18 (in INR)
Economic Value Generated	95,263.51	81,014.93
Economic Value Distributed		
Operating costs	13,905.64	13,691.37
Community investments	557.04	850.01
Payments to Government	1,750.00	400.00
Employee wage and Benefits	24,216.72	20,939.33
Depreciation, Amortization exceptional items, Finance Cost & Other expenses	48,660.75	43,795.67
Economic Value Retained	6,173.36	1,338.55





Our Relationship with Communities



Our Relationship with Communities

Organizations are established to provide goods or services to their customers, but they also become an integral part of the communities in which they operate. We attach great importance in engaging our communities in our day to day operations. We understand that no business can prosper in isolation of its host community. Our major CSR focus areas are supporting government's effort on promoting sanitation and Swachh Bharat, access to healthcare and infrastructure support to local schools.

We believe that quality education grooms children on mental, emotional, and physical skills preparing them for any challenges coming their way. We work with government schools and local bodies to guarantee effective implementation of inclusive education. During the reporting period, we worked with various schools in setting up infrastructural facilities and conduct skill development activities amounting to INR 42 Lakhs. In the upcoming financial year, we shall start detailed reporting on all the three CSR focus areas.

Our Community Development Focus Areas

Healthcare	Sanitation and Swachh Bharat	Infrastructure Support
Access to quality healthcare	Access to sanitation facilities and promote community awareness	Providing infrastructural support to local communities

Volunteering at BE

Volunteering is a key strategic commitment for BE, because it offers both personal development for our people and is at the heart of how we create community legacies. We continue to support our Government in promoting access to healthcare, education and better sanitation. In 2017-19, approximately 80% of our people volunteered in community development activities. We will continue to champion this kind of activity through various programs and reaching most of the communities.

BE Receives First ANDA Approval
USFDA Approves BE's Neostigmine

Biological E. Limited (BE) is pleased to announce that it received the first Abbreviated New Drug Application (ANDA) approval from the United States Food and Drug Administration (USFDA) on May 13, 2019 for Neostigmine Methylsulfate Injection USP, 5 mg/10 mL (0.5 mg/mL) and 10 mg/10 mL (1 mg/mL).

Neostigmine methylsulfate injection, a cholinesterase inhibitor, is indicated for the reversal of the effects of non-depolarizing neuromuscular blocking agents after surgery.

The ANDA was filed on August 22, 2018 and the FDA has assigned the goal date as June 21, 2019.

Hearty congratulations!

Pharma Division | Corporate Communications

Assurance Statement



INDEPENDENT ASSURANCE

OPINION STATEMENT

Statement No: SRA-IND-680600-3

Biological E. Limited (BE) Sustainability Report 2017 – 19

The British Standards Institution is independent to BE and has no financial interest in the operation of BE other than for the assessment and assurance of this report.

This independent assurance opinion statement has been prepared for BE only for the purposes of assuring its statements relating to its sustainability report, more particularly described in the Scope, below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read. This statement is intended to be used by stakeholders & management of BE.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by BE. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to BE only.

Scope

The scope of engagement agreed upon with BE includes the following:

1. The assurance covers the BE's Sustainability Report 2017-19 prepared "In accordance" with GRI Standards – Core option, and focuses on systems and activities of BE covering the operations of the vaccine plant at Shameerpet and Gaganpahad locations and the pharma business at Shameerpet during the period from 1st April 2017 to 31st March 2019.
2. The AA1000 Assurance Standard, AA1000AS (2008 with 2018 Addendum) Type 1 engagement evaluates the nature and extent of BE's adherence to all four AA1000 AccountAbility Principles: Inclusivity, Materiality, Responsiveness and Impact. The specified sustainability performance information/data disclosed in the report has been evaluated.

Opinion Statement

Our work was carried out by a team of sustainability report assurers in accordance with the AA1000 Assurance standard, AA1000AS (2008 with 2018 Addendum) and GRI Standards. We planned and performed this part of our work to obtain the necessary information and explanations we considered to provide sufficient evidence that BE's description of their self-declaration of compliance with the GRI Standards were fairly stated.

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We conclude that the BE's Sustainability Report 2017-19 Review provides a fair view of the BE's CSR programmes and performances during FY 2017-19. We believe that the 2017-19 economic, social and environment performance disclosures are fairly represented. The sustainability performance disclosures disclosed in the report demonstrate BE's efforts recognized by its stakeholders.

Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- A top level review of issues raised by external parties that could be relevant to BE's policies to provide a check on the appropriateness of statements made in the report
- Discussion with senior executives on BE's approach to stakeholder engagement. We had no direct contact with external stakeholders
- Interview with staff involved in sustainability management, report preparation and provision of report information were carried out
- Review of key organizational developments
- Review of supporting evidence for claims made in the reports
- An assessment of the company's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality and Responsiveness as described in the AA1000 AccountAbility Principles Standard (2008 with 2018 Addendum)

Conclusions

A detailed review against the AA1000 AccountAbility Principles of Inclusivity, Materiality, Responsiveness and Impact and the GRI Standards is set out below:

Inclusivity

Being the third year of reporting, BE has not carried out an exclusive survey this time but intends to do so in the year 2019-20. This report has reflected a fact that BE is seeking the engagement of its stakeholders through numerous channels such as client feedback review reports, client surveys and supplier workshops and includes as its stakeholders customers, suppliers, vendors and the local community, apart from considering the feedbacks received from its external stakeholders over the last few years. This internal comprehensive survey within the vaccine business has brought in a wide range of material aspects to be included for reporting.

Biological E Limited is a private sector biological products company in India that specializes in the area of low-cost vaccine production. In this Sustainability Report, material data disclosed is primarily restricted to the operations of the vaccine plant at Shameerpet and Gaganpahad locations and the pharma business at Shameerpet. This report covers the stakeholder issue together with fair reporting and disclosures for economic, social and environmental information. In our professional opinion, the report covers the BE's inclusivity issues that demonstrates participation of stakeholders in developing and achieving an accountable and strategic response to sustainability. However, the future reports should be further enhanced by detailing more information on the pharma business that are located at Patancheru, Dehradun and Azamabad locations.

Materiality

BE publishes sustainability information that enables its stakeholders to make informed judgments about the company's management and performance. In our professional opinion the report

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Assurance Statement



covers the BE's material issues by using BE's materiality matrix and boundary mapping, however, the future report should be further enhanced in the following areas:

- Show relation for how different stakeholder will have different rate of importance for different issues.
- Provide more information regarding threshold for materiality determination.

Responsiveness

BE has implemented the practice to respond to the expectations and perceptions of its stakeholders. It includes client survey and different feedback mechanisms to their stakeholders. The Report brings out BE's feedback and responses on key concerns, expectations and issues raised by its key stakeholders through its policies, strategies, management systems and governance mechanisms that the Company has established. In our professional opinion nothing has come to our attention to suggest that the responses related to identified material topics are not adequately represented in the Report. However, the future report should be further enhanced by including a formal mechanism for recording, collating and addressing the feedback received from the stakeholders.

Impact

BE has also demonstrated that adequate systems are in place to monitor, measure and be accountable for their actions that affect the economy, the environment, society, stakeholders and the organisation itself.

GRI-reporting

BE provided us with their self-declaration of compliance GRI Standards and the classification to align with "In accordance" - Core.

Based on our verification review, we are able to confirm that social responsibility and sustainable development disclosures in all 3 categories (Environmental, Social and Economic) are reported with reference to "In accordance" with the GRI Standards – Core option.

The majority of data and information verified at the Head Office and at sample locations visited by us were found to be fairly accurate and reliable. Some of the data inaccuracies identified during the verification process were found to be attributable to transcription, interpretation and aggregation errors and these errors have been corrected. It is suggested that BE may implement appropriate tools for sustainability data management and initiate a process of internal reviews and validation to further strengthen the reliability of its performance disclosures.

In our professional opinion the self-declaration covers BE's social responsibility and sustainability issues. On the basis of the verification undertaken, nothing has come to our attention to suggest that the Report does not properly describe the following sustainability disclosures as stipulated in the GRI Standards.

- GRI 302: Energy 2016 - 302-1, 302-3, 302-4;
- GRI 303: Water 2018 - 303-1, 303-2, 303-3; 303-4;
- GRI 305: Emissions 2016 - 305-1, 305-2, 305-7;
- GRI 306: Effluents and Waste 2016 - 306-1, 306-2;
- GRI 307: Environmental Compliance 2016 - 307-1;
- GRI 403: Occupational Health and Safety 2018 - 403-1; 403-2; 403-3; 403-4; 403-9
- GRI 404: Training & Education - 404-1; 404-3
- GRI 413: Local Communities 2016 - 413-1;

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- GRI 416: Customer Health and Safety 2016 – 416-2;
- GRI 417: Marketing and Labeling 2016 – 417-2

Competency and Independence

The assurance team was composed of Lead auditors experienced in industrial sector, and trained in a range of sustainability, environmental and social standards including GRI-G4 and GRI Standard, AA1000, ISO10002, ISO 14001, OHSAS 18001, and ISO 9001, etc. BSI is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

Assurance Level

The type 1 moderate level of assurance provided is in accordance with AA1000 Assurance standard, AA1000AS (2008 with 2018 Addendum) in our review as defined by the scope and methodology described in this statement.

Responsibility

It is the responsibility of BE's senior management to ensure the information presented in the Sustainability Report is accurate. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

For and on behalf of BSI:



Kumaraswamy Chandrashekara
Head - Sustainability, BSI Group India



Mr Wilfred Chan
Head of Operations, BSI Asia Pacific
3 January 2019

New Delhi, India



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General Standard Disclosures- "In Accordance – Core"			
GRI Standard	Disclosure Description	Name of the Chapter Omissions	Page Number
Organizational Profile	102-1 Name of the organization	Organizational Footprint	18
	102-2 Activities, brands, products, and services		23-26
	102-3 Location of headquarters		20-21
	102-4 Location of operations		20-21
	102-5 Ownership and legal form		18
	102-6 Markets served		27-28
	102-7 Scale of the organization		18-28
	102-8 Information on employees and other workers		22-23
	102-9 Supply chain	Responsible Sourcing	69-73
	102-10 Significant changes to the organization and its supply chain	No significant changes during the reporting period	-
	102-11 Precautionary Principle or approach	Organizational Footprint	30
	102-12 External initiatives		30
	102-13 Membership of associations		30
Strategy and Analysis	102-14 Statement from senior decision-maker	Foreword from Managing Director	8-9
		Letter from Senior Vice President	10-11
		From Chief Operating Officer's Desk - Vaccine Business	12-13
		Chief Operating Officer's Message – Pharmaceutical Business	14-15
Ethics and Integrity	102-16 Values, principles, standards, and norms of behavior	Organizational Footprint	6-7
Governance	102-18 Governance structure	Corporate Governance	44-51
Stakeholder Engagement	102-40 List of stakeholder groups	Stakeholder Engagement & Materiality Assessment	40-41
	102-41 Collective bargaining agreements	Social Footprint	83
	102-42 Identifying and selecting stakeholders	Stakeholder Engagement & Materiality Assessment	40-41
	102-43 Approach to stakeholder engagement		40-41
	102-44 Key topics and concerns raised		42-43
Reporting Practice	102-45 Entities included in the consolidated financial statements	Please refer to Annual Report 2017-18 and 2018-19	-
	102-46 Defining report content and topic Boundaries	Stakeholder Engagement & Materiality Assessment	42-43
	102-47 List of material topics		42-43
	102-48 Restatements of information	About the Report	2
	102-49 Changes in reporting		2
	102-50 Reporting period		2
	102-51 Date of most recent report		2
	102-52 Reporting cycle		2
102-53 Contact point for questions regarding the report	2		

Reporting Practice	102-54 Claims of reporting in accordance with the GRI Standards	About the Report	2
	102-55 GRI content index	GRI Content Index	96-99
	102-56 External assurance	External Assurance Report	92-95
Category: Economic			
GRI 103 Management approach 2016	103-1 Explanation of the material topic and its Boundary	Stakeholder Engagement & Materiality Assessment	40-43
	103-2 The management approach and its components	Economic Performance	90
	103-3 Evaluation of the management approach		90
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed		90
GRI 203: Indirect Economic Impacts 2016	203-2 Significant indirect economic impacts	Our Relationship with Communities	91
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	Organizational Footprint	28
Category: Environment			
GRI 103 Management approach 2016	103-1 Explanation of the material topic and its Boundary	Stakeholder Engagement & Materiality Assessment	40-43
	103-2 The management approach and its components	Environmental Footprint	52
	103-3 Evaluation of the management approach		52
GRI 302: Energy 2016	302-1 Energy consumption within the organization		Environmental Footprint
	302-3 Energy intensity	59-60	
	302-4 Reduction of energy consumption	59-60	
GRI 303: Water 2018	303-1 Interactions with water as a shared resource	Environmental Footprint Omissions: Values of Total Dissolved Solids (TDS) have not been reported	53-58
	303-2 Management of water discharge-related impacts		53-58
	303-3 Water withdrawal		53-58
	303-4 Water discharge		53-58
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Environmental Footprint	60-62
	305-2 Energy indirect (Scope 2) GHG emissions		60-62
	305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions		60-62
GRI 306: Effluents and Waste 2016	306-1 Water discharge by quality and destination	Environmental Footprint	56-58
	306-2 Waste by type and disposal method		63-65
GRI 307: Environmental Compliance 2016	307-1 Non-compliance with environmental laws and regulations	Environmental Footprint	66
Category: Social			
GRI 103 Management approach 2016	103-1 Explanation of the material topic and its Boundary	Stakeholder Engagement & Materiality Assessment	40-43

GRI 103 Management approach 2016	103-2 The management approach and its components	Social Footprint	76
	103-3 Evaluation of the management approach		76
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	Social Footprint	78-80
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees		78-80
	401-3 Parental leave		78-80
GRI 403: Occupational Health and Safety 2018 Management approach disclosure	403-1 Occupational health and safety management system	Social Footprint	81-86
	403-2 Hazard identification, risk assessment and incident investigation		81-86
	403-3 Occupational health services		81-86
	403-4 Worker participation, consultation, and communication on occupational health and safety		81-86
	403-5 Worker training on occupational health and safety		81-86
	403-6 Promotion of worker health		81-86
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships		81-86
GRI 403: Occupational Health and Safety 2018 Topic specific disclosure	403-9 Work-related injuries	Social Footprint	81
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	Social Footprint	82-83
	404-3 Percentage of employees receiving regular performance and career development reviews	Omissions: Gender-wise training data	83
GRI 413: Local Communities	413-1 Operations with local community engagement, impact assessments, and development programs	Our Relationship with Communities	91
GRI 416: Customer Health and Safety 2016	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	Social Footprint	84-86
GRI 417: Marketing and Labeling 2016	417-2 Incidents of non-compliance concerning product and service information and labeling	Social Footprint	84-86
Customer* satisfaction	103-1 Explanation of the material topic and its Boundary	Social Footprint	84-85
	103-2 The management approach and its components		84-85
	103-3 Evaluation of the management approach		84-85
Transparent reporting and communication*	103-1 Explanation of the material topic and its Boundary	Social Footprint	85
	103-2 The management approach and its components		85
	103-3 Evaluation of the management approach		85

Access to medicine*	103-1 Explanation of the material topic and its Boundary	Social Footprint	85-86
	103-2 The management approach and its components		85-86
	103-3 Evaluation of the management approach		85-86
Product Responsibility*	103-1 Explanation of the material topic and its Boundary	Social Footprint	84
	103-2 The management approach and its components		84
	103-3 Evaluation of the management approach		84

*Non GRI Topic



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Celebrating Life Everyday

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